

## NHS England and NHS Improvement Board meetings held in common

**Paper Title:** Covid-19 response overview

**Agenda item:** 4 (Public Session)

**Report by:** National Directors, NHSE/I

**Paper type:** For discussion

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### Organisation Objective:

NHS Mandate from Government	<input type="checkbox"/>	Statutory item	<input type="checkbox"/>
NHS Long Term Plan	<input checked="" type="checkbox"/>	Governance	<input type="checkbox"/>
NHS People Plan	<input type="checkbox"/>		

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### Executive summary:

This paper provides an overview of the work of the NHS to prepare for and respond to Covid-19. It recognises the extraordinary contribution and burden placed on NHS and other staff to care for and treat Covid and non-Covid patients. Covid-19 has been the greatest public health emergency since the foundation of the National Health Service. In the face of a pandemic, NHS staff working flexibly alongside other key workers responded magnificently while working under unprecedented pressure, innovating and adapting to those in need of treatment and care.

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### Action required:

The Boards are asked to consider the Covid-19 response and the clinical and operational innovations achieved across the NHS. This is not an assessment of the overall UK response to the pandemic, which will be a matter for Parliament and the promised future public inquiry.

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### Background:

1. Since the first two Covid patients were treated at the High Consequences Infectious Diseases Unit at Newcastle Royal Victoria Infirmary at the end of January 2020, the NHS in England has cared for over 380,000 Covid-positive patients with around one person with the virus admitted to critical care every 30 minutes, inevitably impacting on other areas of patient care (as has also been seen in most other European countries). At the peak of the pandemic in January 2021, around 4,000 Covid patients were being looked after in critical care every day. In order to ensure that all those who needed critical care received it, hospitals expanded critical care capacity by around 50% above their usual capacity, with some areas surging to over 80% above their usual capacity. The NHS has provided over 33,620 Covid-19 patients with the most intensive level of care since the first case was diagnosed. One of the benefits of having a National Health Service are the mechanisms in place to allow trusts to offer and seek mutual support. This ensured that critical care units could be decompressed making use of established critical care network capability.

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Thanks to these efforts and the hard work of NHS staff, the NHS did not run out of capacity to provide critical care anywhere in the country at any point in the pandemic.

2. In addition to treating Covid-19 patients, hospitals transformed to continue to support non-Covid patients. At each point in the pandemic the NHS has looked after at least twice as many inpatients without Covid-19 as Covid-19 patients, with nearly 20 million people receiving emergency care in England's A&Es in 2020. In primary care, many GPs switched to providing some care virtually, which meant more than 280 million appointments could be carried out over the past year.
3. NHS hospitals and primary care teams have been at the forefront of recruitment into and delivery of clinical trials which have identified effective Covid-19 treatments benefitting patients across the NHS and around the world. Over one million (1,075, 000) people have taken part in Covid-19 research in the UK. NIHR-supported platform trials, such as RECOVERY and REMAP-CAP, have been pivotal in generating key evidence for the mortality and recovery benefits conferred by dexamethasone (now the standard of care in the treatment of hospitalised patients with COVID-19 requiring oxygen) and tocilizumab. The NHS has therefore contributed to saving approximately 22,000 lives in the UK and close to one million lives across the world. The RAPID C-19 collaboration has ensured UK-wide adoption of these effective Covid-19 therapies in an average of just 6 days from material research findings becoming available to treating patients in the NHS.
4. The NHS was also the first health service in the world to deliver the Pfizer and Oxford Astra-Zeneca vaccines outside of a trial, and has also now delivered over 22 million vaccine doses to those most vulnerable to Covid-19 in the largest vaccine roll out in the history of the health service and the fastest and best targeted vaccine roll out in Europe and for any large country in the world.
5. Responding to Covid-19 has placed extraordinary pressures on the NHS, impacting significantly on the experience of staff and patients. The task ahead facing the NHS will be to embed the innovations achieved, supporting the flexibility and adaptability of NHS staff working across team and organisational boundaries. We need to continue to support NHS staff, and continue to support patients by tackling the backlog in care created by this pandemic, while responding to future prevalence of Covid-19 and delivering the vaccines that will secure recovery.

### Preparing the NHS for COVID-19

6. By 22 January 2020, NHSEI established our formal Covid incident management structure and national incident coordination centre. On 30 January, the first two people in the UK tested positive for Covid-19 (then called Wuhan novel coronavirus) and were transferred to a High Consequence Infectious Disease Unit in Newcastle. On the same day, the first phase of the NHS's response to the virus was formally triggered with the declaration of a Level 4 National Incident – the highest category of emergency – and national command and control arrangements were put in place.

7. At the Government's request, NHSEI worked with local and national partners to rapidly mobilise quarantine facilities to accommodate UK citizens who had been evacuated from Wuhan. Accommodation on the site of Arrowe Park Hospital in the Wirral was readied over a few days and welcomed its first 83 arrivals on 31 January. A second quarantine centre was established at Kent's Hill Park hotel and conference centre in Milton Keynes in early February. In total around 241 citizens were supported to isolate across these two centres.
8. NHS High Consequence Infectious Disease capacity was also expanded to monitor and care for patients during this period. Between February and early March, capacity of five existing units in England was increased with an additional six infectious disease centres identified to supplement the HCID Network.
9. NHSEI's incident response arrangements were enhanced further through February 2020. A National Incident Response Board was established to oversee the NHS response, regional incident centres were established alongside the national incident coordination centre (operating 7 days a week), and additional expert 'cells' and clinical leadership mobilised to support preparations. On 2 March, NHSEI wrote to NHS organisations asking them to step up preparations in light of the continued spread of the virus in multiple countries. Ten days later, on 11 March, the WHO declared a pandemic.

**Chart one: Number of confirmed Covid-19 inpatients**

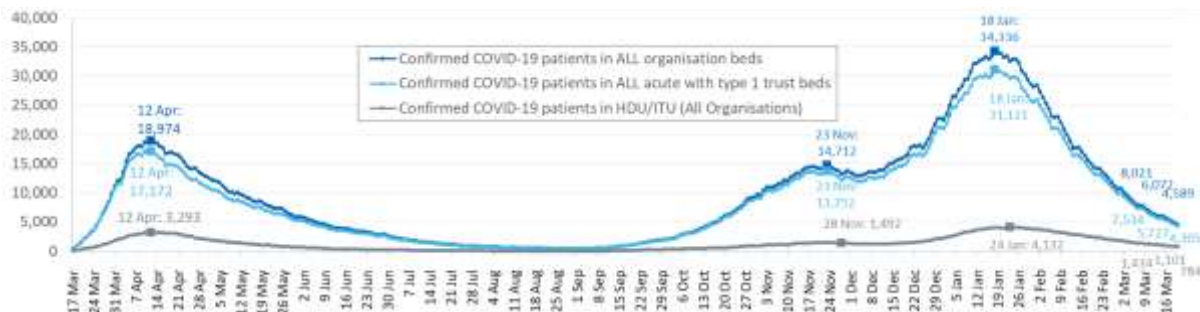
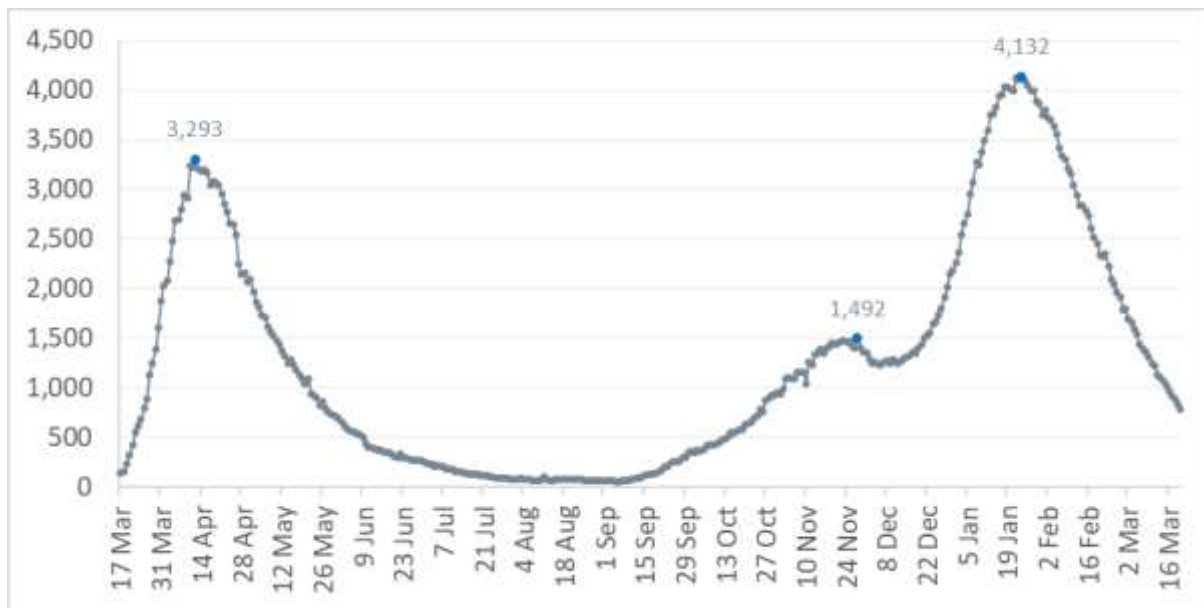


Chart two: Number of confirmed Covid-19 patients in HDU/ITU



## Achieving Surge Capacity for Covid Care

### Wave one:

10. Following the Prime Minister's announcement on 12th March of a move from the 'contain' to 'delay' phase and agreement with Government that week on the actions needed to free up hospital capacity, NHSEI initiated a rapid repurposing of NHS services, staffing and capacity to meet the expected surge in Covid demand. Urgent actions were enacted to: free-up the maximum possible inpatient and critical care capacity; prepare for, and respond to, the anticipated large numbers of Covid-19 patients who would need respiratory support; support staff, and maximise their availability; stress-test operational readiness; and remove routine administrative burdens.
11. NHS systems acted rapidly to enact surge plans and ensure Covid patients received the care they needed. Through conversion of operating theatres and other clinical spaces, expansion of ITUs, and standing down non-urgent elective activity, hospitals were able to increase the level of capacity available for the most acutely unwell (requiring mechanical ventilation), but also increase available capacity for those in acute beds requiring non-invasive ventilation. As clinicians learned more about Covid-19, treatment changed as it became clear that the optimal therapy for most hospitalised Covid-19 patients turned out to be types of enhanced oxygen therapy which can be given in a general ward, rather than the patient being sedated on a mechanical ventilator in intensive care. In addition to enacting well-rehearsed surge plans, through agreement between local partners, temporary service reconfigurations were implemented to ensure staff could be re-deployed to bolster the services that were experiencing the most demand. Ward capacity was also freed up through additional Government funding for enhanced discharge arrangements to reduce inappropriate hospital length of stay, supported by emergency legislation. At the peak of wave 1 in

April 2020, there were 18,974 Covid-19 positive inpatients, with 2,868 on mechanical ventilation.

12. The Covid-19 Response Service was initially established at the end of February and rapidly increased capacity through March, in response to rapidly increasing NHS 111 demand. At peak demand the service received 450k calls in a single week.

#### Wave two:

13. At the beginning of September 2020 there were 496 hospitalised patients in the NHS in England. On 23<sup>rd</sup> December 2020 NHSEI wrote to all provider and system leaders to reinforce the 5 key operational planning priorities, which were: responding to Covid-19 demand; implementation of the Covid-19 vaccination programme; maximising capacity in all settings to treat non-Covid-19 patients; responding to other emergency demand and managing winter pressures; Supporting the health and wellbeing of our workforce.
14. In preparation for a potential further wave of Covid demand, each NHSEI Region worked with the ICS/STPs within its footprint to develop an escalation and surge plan. Each system developed a mutual aid approach at system and regional level to enact full regional critical care surge plans. For wave 2, NHSEI established a new national Critical Care Capacity Panel, which reviewed capacity in the most pressured systems daily and coordinated mutual aid. At the peak of wave 2/3, there were 34,336 Covid-19 positive inpatients, with 3,736 on mechanical ventilation and hospitals admitted more than 100,000 patients with Covid-19 in January 2021 alone

#### Maintaining essential patient care and tackling the elective backlog

15. By necessity, a considerable number of elective services were disrupted in many countries including the UK during peak Covid. This, coupled with challenges posed by the implementation of necessary Infection Prevention and Control (IPC) measures to limit the spread of Covid, meant that new solutions were urgently needed to meet the key challenge of supporting elective activity to restart and to recover towards the levels seen before the pandemic. On 29<sup>th</sup> April 2020, NHSEI wrote to all provider and system leaders across the NHS triggering phase 2 of the pandemic response, asking them to fully stand up non-Covid urgent services as soon as possible. This was just 14 days after the deadline trusts had been given for the postponement of all elective activity.
16. To support this and to support the wider re-start of elective services, NHSEI launched the Adopt & Adapt Programme, which consisted of workstreams supporting 5 key patient areas: Endoscopy; CT/MRI; Outpatients; Theatres; Cancer. The approach was built on the following key components:
  - Using technology, clinical reviews and standardised pathways in support of triaging to manage demand appropriately.

- Prioritising workforce capacity to support challenged services, in much the same way that staff were deployed to critical care during wave 1.
  - Promotion of and implementation support with PHE for IPC best practice and guidance including on: Covid/Non-Covid pathways; self-isolation guidance; testing; PPE; cleaning and building ventilation guidelines relevant to the service in question.
  - Taking advantage of opportunities to better utilise NHS facilities by sharing waiting lists; using independent sector capacity and identifying temporary facilities to support IPC measures.
17. The NHS mobilised increased Advice & Guidance services to ensure secondary care provided clinical advice to support to primary care elective services. Annual activity increased from 300k to a projected 1.1m requests. Around a third of all outpatients attendances are now delivered by telephone or video consultation – up from just 4% in 2019/20, surpassing the NHS’s original Long Term Plan goal. Early evaluation work has shown high levels of satisfaction with remote outpatient care – and avoiding the need for trips to hospital benefits citizens with less time off work, school or spare time.
  18. By early/mid November 2020 (in the run-in to Covid wave 2), overnight and day case elective activity had recovered to 80% of the levels seen at the same time last year, with outpatients still running at around 90% of last years’ levels even into December. Diagnostic activity recovered to an even greater extent – by mid-November colonoscopy and gastroscopy activity was back to over 95% of the levels seen last November, and the NHS was delivering over 100% of the CT activity at the same time in the previous year.
  19. In cancer, at the start of the pandemic there was a reduction in the number of people coming forward to have their symptoms checked, and some disruption to cancer diagnostics and treatment. However, thanks to the efforts of NHS staff and their partners, between March and December 2020, nearly 1.7 million people were urgently referred and over 228,000 people started treatment for cancer - 95% within 31 days. In December, urgent referrals were at 107% of pre-pandemic levels and first treatments were at 102% while there has been some impact of the current pressures on urgent cancer referrals, this is not to the extent that was seen in the pandemic. The majority of treatment has continued.
  20. 228,000 people started treatment for cancer between March and December 2020. For people who have symptoms but have not yet contacted their GP, public awareness raising, for example through the ‘Help us help you’ campaign, will continue to be an important part of our approach.

### Developing trials and research to support Covid-19 patients

21. NHS research adapted to focus on recruiting to urgent public health (UPH) Covid-19 studies and vaccine studies. Over 1 million participants have been



recruited into UPH/ONS Covid-19 studies including RECOVERY, PRINCIPLE and REMAP-CAP.

22. In June 2020, the investigators from RECOVERY, a National Institute for Health Research (NIHR)-sponsored randomised platform trial across 177 sites in the UK, announced the first drug to reduce mortality from Covid-19. Dexamethasone was shown to reduce death by one-third in mechanically ventilated patients and by one-fifth in patients receiving supplemental oxygen only. This meant that 1 death would be prevented in treating every 8 mechanically ventilated patients or around 25 patients requiring supplemental oxygen only. Dexamethasone also reduced median length of stay in hospital by one day and decreased the risk of progression to mechanical ventilation (in patients not already ventilated at the start of treatment) by 24%. These findings led to the World Health Organisation's global recommendation for the use of corticosteroids in the treatment of severe and critical Covid-19. Dexamethasone is estimated to have saved approximately 22,000 lives in the UK and close to 1 million lives globally between July 2020 and March 2021 (extrapolated from modelling in [Aguas et al, 2021](#)).
23. The NHS also responded swiftly to emerging evidence around the benefits of tocilizumab, a repurposed drug usually used to treat severe rheumatoid arthritis. REMAP-CAP, an international platform trial (with NHS hospitals forming the majority of sites within its Covid-19 domain), announced that in patients critically ill with Covid-19 pneumonia, tocilizumab reduced ITU stay by 10 days and resulted in an 8% absolute reduction in mortality. Results from RECOVERY subsequently showed that tocilizumab could support a 4% absolute reduction in 28-day mortality in a broader hospitalised population requiring supplemental oxygen. These results meant that one death could be prevented by treating around 12 patients requiring critical care or 25 patients with systemic inflammation requiring supplemental oxygen.
24. Following announcements from trials, NHSEI led on the finalisation of UK wide interim clinical commissioning policies and associated delivery arrangements to ensure the timely roll out of treatments to eligible patients. The Research to Access Pathway for Investigational Drugs for Covid-19 ('RAPID C-19') is a multi-agency collaboration that reviews the emerging evidence for potentially promising Covid-19 treatments across all settings. This approach enables a rapid recommendation to be made following material clinical trial results and supports timely UK wide decisions on making these agents available for frontline use in the NHS. It was through this approach that treatments such as dexamethasone and tocilizumab were rolled out to the NHS, typically within just 6 days of material new trial data becoming available to treating patients outside of a trial.

## Planning and delivering the NHS vaccination programme

25. In Summer and Autumn 2020, the NHS began planning for the biggest vaccination programme in NHS history, which continues to be critical to turning the tide against the virus and potentially saving thousands of lives. NHS England/Improvement was asked by Government to lead the vaccine delivery

programme, and the NHS was the first health service globally to deliver the Pfizer and Oxford Astra-Zeneca vaccines outside of a trial. As of 20 March, the NHS has administered over 22 million doses in England, outperforming all other large countries in terms of the proportion of the population vaccinated. This achievement, managed alongside winter pressures and the demands of treating patients with Covid-19, would not be possible without the dedication of tens of thousands of NHS staff and volunteers.

26. A network of Covid-19 vaccination sites has been designed to provide the capacity required and ensure safe and easy access for the whole population. The NHSEI vaccines programme is now comprised of a fully supplied network of 267 hospital hubs, 1,271 Local Vaccination Services and 138 vaccination centres, ensuring that over 99% of the population in England live within 10 miles of an NHS vaccination service. In a small number of highly rural areas, the vaccination centre will be a mobile unit.
27. A remarkable milestone was achieved by offering a vaccination to those in the top four priority Cohorts identified by the Joint Committee on Vaccination and Immunisation (JCVI) (c.12m people in England) within 10 weeks of the first person being vaccinated. The programme is now vaccinating Cohorts 5-9 with an ambition to offer first dose by 15 April, followed by Cohorts 10-12 (all remaining adults aged 18 – 49) by 31 July.
28. Addressing health inequalities is a top priority for the vaccination programme. Local engagement and collaboration across the NHS, local authorities and voluntary, community and faith sectors has ensured vaccination services can operate in underserved communities. This has given rise to new approaches such as opening vaccination sites in places of worship and working with trusted community voices to increase confidence and improve uptake.

### Next steps

29. **Covid:** Following the latest peak in Covid-19 demand in January, the number of patients in hospital with Covid-19 is declining steadily. We continue to monitor the situation closely as lockdown restrictions are gradually eased and the vaccination programme expands. Learning from our response to the recent surge will be reviewed to inform preparations for any future wave of Covid-19, as well as NHS recovery from the impact of the pandemic.
30. **Elective Recovery:** As the pressures of the latest Covid impacts subsides, attention turns immediately to the elective recovery challenge. An additional £1bn funding has been made available to the NHS in 2021-22 to begin to tackle the backlog that has developed. NHSEI will shortly set out the approach to planning for recovery and how the £1bn fund will be accessed in planning guidance for the first half of 2021-22.
31. **Clinical Trials:** A cross sector Research Resilience and Growth Programme has been established to support the restoration of non-Covid-19 research and stimulate recovery as care services return to normal. New research projects are being developed to understand the long-term effects of Covid-19 in non-



hospitalised individuals. A UK wide clinical research vision with action plans will be published this month.

32. **Vaccines:** It is not currently known for how long people who receive a Covid-19 vaccine will be protected as the protection vaccines confer may weaken over time and new variants of the virus may emerge against which current vaccines are less effective. To ensure the country is prepared, and while further evidence is gathered, NHSEI is planning for a Covid-19 revaccination campaign, which is likely to run later this year in autumn or winter, alongside the annual flu vaccination programme.

## Annex: Additional Facts and Figures

- **Critical Care:** A total of £237m was invested to improve resilience in critical care provision as part of preparations for Winter 20/21. Schemes have included adult critical care transfer services, new modular builds, the upgrading of existing ward spaces and enabling estates work such as improved lift access, ventilation to avoid oxygen build up. Over £10m of dedicated funding has been allocated to support critical care staff to improve patient outcomes and reduce risk of psychological harm to staff. Half is being used to train non-critical care staff according to international standards to work in critical or enhanced care areas and enable them to bolster the total available critical care workforce. The second half will enhance pastoral and well-being support which will be available to all staff working in critical, enhanced and respiratory care areas.
- **UEC Case Mix:** Analysis by the National Clinical Director for Urgent and Emergency care found that within the reduction in A&E attendances, there was a 14:1 ratio of lower:higher acuity volumes, indicating that those higher acuity patients who needed care in an ED by and large still presented.
- **NHS 111:** The NHS has answered more than 18 million calls via NHS 111, a 19.6% increase on the previous year's call volume, giving more people needing urgent care an alternative to attending A&E, where appropriate.
- **111 First:** Early data from the implementation of 111 First has indicated that around 27% of patients recommended to attend ED were given a time slot, with a further 5-10% being recommended to attend Same Day Emergency Care, avoiding the need to visit the ED.
- **Improved UEC capacity:** £450m has been invested in A&E capital projects nationally to improve A&E capacity and patient flow. 25 larger and 175 smaller schemes started to come online in the run up to winter, to realise benefits including the expansion of same day emergency care and priority assessment units; reconfiguring waiting rooms to maintain social distancing; and increasing waiting capacity and cubicle numbers. The 25 larger schemes will continue to late 2021.
- **Community Health:** Staff supported community services including supporting care homes and included 11,798 care homes receiving intensive Infection Prevention and Control training through 371 'supertrainers' and 2,474 local trainers.
- **Volunteer Responders:** A total of 1,574,304 tasks had been completed by NHS Volunteer Responders for over 153,000 vulnerable individuals. The NHS has worked with the British Red Cross, St John Ambulance, Age UK and RVS who have offered support services to 107 NHS Trusts as part of surge planning.

- **Enhanced laboratory capacity and testing:** The NHS stood up additional laboratory capacity in our pathology networks and 96 laboratories across the NHS currently undertake Covid-19 testing.
- **Stroke:** The NHS established 20 Integrated Stroke Delivery Networks across England to deliver integrated stroke care across the entire pathway, including closer collaboration of providers, a networked workforce solution leading to high-quality and sustainable stroke services. A blood pressure at home project has been rolled out and virtual clinics for TIAs (mini strokes) have helped ensure that patients are treated in a timely manner without having to attend hospital where possible. More clinical teams are using virtual rehabilitation alongside face-to-face contact to ensure every patient gets the treatment and support they need. Almost half of stroke survivors have had virtual care since Covid began with data reporting mostly positive or very positive experiences.
- **Mental Health:** Mental health services have remained open throughout the pandemic. Whilst the first lockdown impacted referral routes and access rates, in some cases referrals have now returned to pre-pandemic levels. Local services have worked rapidly to respond to the changing context.
- **Enhanced support for NHS staff:** Investments in new health and wellbeing services to support our staff through the pandemic are continuing, including a confidential support service, apps (including one aimed specifically at BAME staff), online resources and a specialist bereavement support service. A specific package has been developed to support critical care staff. A national staff health and wellbeing support offer was developed to ensure NHS staff's psychological and physical safety and has been accessed over 780,000 times by NHS staff. NHS England and NHS Improvement has invested £15 million to ensure NHS staff get rapid access to assessment and evidence-based mental health services and support as required which include critical care nurses, paramedics, therapists, pharmacists and support staff, with conditions such as anxiety or depression. A range of resources for both individuals and teams, such as free apps, coaching support, helpline and text service, leadership support for line managers and executives has been well evaluated throughout the pandemic. The 'end to end pathway approach' spans primary prevention through to specialist mental health treatment for staff who will need it, accessed through 40 Mental Health Hubs.
- **Workforce:** The NHS attracted new staff with workforce growth of 46,000 whole time equivalents over the past year. This included staff returning through the Bring Back Staff campaign and up to 2,000 MOD staff at times of pressure. International recruitment continued with 6,800 nurses joining the NHS since April 2020 from across the world. Students and trainees from across professions also contributed to patient care provision. During wave 1, the NHS rapidly onboarded retired and sessional GPs to the NHS111 CCAS service, recruiting over 2000 GPs. These GPs have delivered over 495,000 calls in the course of the pandemic.
- **Independent Sector:** The NHS agreed a contract with the independent sector to provide 8,000 beds including nearly 6,000 with piped oxygen, over 16,000

clinical staff and more than 1,000 ventilators. The contract initially provided capacity, staff and equipment and evolved to focus on elective recovery and support further surges. In total from March 2020 to February 2021 almost 3 million NHS patients have been seen within independent sector facilities.

- **Oximetry at Home:** NHS systems rapidly moved to implement [COVID Oximetry @home](#) (CO@h) and [COVID Virtual Ward](#) (CVW) models during the pandemic to allow self-identification of silent hypoxia and supported discharge of COVID inpatients respectively with all CCGs setting up a CO@h service by the end of December 2020 and over 90% of systems with CVWs by March 2021. Estimates are that over 100k patients have benefited from these pathways.
- **Nightingales:** To provide a 'safety net' for the acute sector, Nightingale Hospitals were established to provide additional capacity as a 'last resort' insurance policy. It is a success that they were not required to care for large numbers of inpatients. Initially introduced in London, but implemented in other regions of the country, these centres provided additional critical care support, increased medical ward-based provision, step-down care to facilitate discharge from acute hospitals, and additional diagnostic and out-patient capacity. They were rapidly stood up again for this winter, adapting their offer as needed. Some are now also supporting the Covid vaccine roll-out.
- **Primary care:** All primary care providers across general practice, pharmacy, dental and optometry continue to deliver care which is safe, necessary and clinically prioritised. Providers of dentistry and optometry reopened for non-urgent and essential care.
  - **General Practice:** General practice care has been transformed, adopting a total triage model, streaming Covid and non-Covid patients, and delivering an enhanced service for care homes, the Oximetry at Home service, and maintaining the shielded patient list. 99% of practices now have video consultation capability, and over 95% have online consultation capability. Rates of requests submitted by patients via online consultation systems to general practice have more than doubled from around 250,000 per week to over 550,000 per week between March 2020 and January 2021. Overall GP appointments have increased by ~15% by late January, once Covid vaccinations are included, bringing general practice up to a ~7m per week run rate. This is 1m per week above pre-pandemic levels.
  - **Community Pharmacy:** The community pharmacy sector has continued to delivery high levels of activity on the front line of the pandemic response, delivering a significant share of Covid-19 vaccinations, and stepping up a home delivery service for shielding patients.
  - **Dental:** Notwithstanding elevated IPC requirements which continue to have significant impacts on productivity, over 650 urgent dental centres were established early in the pandemic to maintain access to urgent care and urgent courses of treatment were back to pre-pandemic levels by August 2021.
  - **Optometry:** The Optometry sector was impacted in the first wave when routine services closed but activity levels have since been successfully recovered and maintained.