Briefing note on managing the long-term effects of Covid-19

Purpose of briefing

1. There is growing evidence of the long-term effects of Covid-19, also known as 'post-Covid syndrome' or 'Long Covid'. Clinicians are seeking guidance on how to support people affected on an ongoing basis, and patient groups are increasingly raising this as an issue. This paper sets out what we know about this issue, what is currently being done by the NHS to address it and further opportunities to join up services to provide a cohesive offer to patients suffering from long-term Covid-19.

Background

2. A growing number of people, including some who have not been hospitalised or received a Covid-19 diagnosis, are reporting long-term symptoms from it. These vary widely, from chronic fatigue, heart and lung problems to anxiety and stress and cognitive impairment. Studies of the proportion of people suffering prolonged illness post onset of Covid-19, range from 10% to 35% for 21 days or more[1],[2].

3. At least 60,000 people in the UK with post-acute Covid-19 may need some form of rehabilitation support for ongoing physical and psychological conditions this year.

4. Health care professionals, particularly in respiratory services, are seeking information and guidance for the appropriate clinical pathways to adopt for patients with ongoing symptoms and finding capacity in the system to manage these patients.

5. The 'Long Covid Support Group' a group consisting of 18,000 Facebook members, feel they are struggling with persistent and sometimes debilitating symptoms and would like the NHS to do more to support their ongoing health needs in terms of its capacity, expertise and research.

6. The evidence base for acute management of patients with severe Covid-19 is developing well, but less is known about chronic long-term effects and patient numbers requiring ongoing rehabilitation and support in primary care and in the community. An NIHR study has been launched into the long-term effects of Covid-19 amongst hospitalised patients who have been discharged[3]. It will look at psychological and rehabilitation needs and consider how individual characteristics, such as gender or ethnicity, influence recovery. The study aims to recruit 10,000 people from across the UK.

7. A proportion of the 5,000 patients who have been on intensive care will need specialist in-patient rehabilitation, and ongoing community based multidisciplinary rehabilitation. Around 20% of these more seriously affected Covid-19 survivors will have significant post-acute ongoing care needs for pulmonary fibrosis and perhaps 20% will have significant cardiac involvement requiring treatment.

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[1] Greenhalgh et al (2020) *Management of post-acute Covid-19 in primary care* https://www.bmj.com/content/370/bmj.m3026

[2] Tenforde et al (2020) *Symptom Duration and Risk Factors for Delayed Return to Usual Health Among Outpatients with COVID-19 in a Multistate Health Care Systems Network — United States.* CDC MMWR 2020 / 69(30);993-998

[3] https://www.nihr.ac.uk/news/major-study-into-long-term-health-effects-of-covid-19-launched-in-the-uk/25200

8. These patients are also more likely to present with acute mental health needs with an expected increase in presentation of post-traumatic stress disorder (PTSD), particularly for those who were ventilated. Italian and Chinese studies, carried out at the beginning of the pandemic, found there was a higher risk of developing PTSD in survivors who faced the threat of death[4 5] and previous studies have reported PTSD as a potential effect of medical emergencies with a meta-analysis finding that the condition occurred in a fifth of critical illness survivors at 1-year follow up[6]. Some sufferers have also reported that post-acute Covid-19 can be associated with low mood, hopelessness, heightened anxiety, and difficulty sleeping.[7]

Covid-19 patient cohorts

9. It is estimated that 80% of people who contract the Covid-19 will experience a mild form. Around 15% will have a severe form requiring hospitalisation and 5% will have a critical form of the disease requiring intensive care.[8]

10. People who have tested positive for coronavirus are a heterogeneous group that can be subdivided for the purposes of their management and support:
    - Those who require critical care during their coronavirus infection and who go on to need specialist rehab and supportive care as an inpatient and subsequently at home.
    - Those who had a significant coronavirus illness in a general hospital ward or at home who may have serious ongoing health problems.
    - Those who tested positive for coronavirus or who had clinically indicative symptoms who remained at home throughout. These patients may subsequently experience fatigue and breathlessness and may have a broad spectrum of ongoing symptoms.

Patient numbers requiring ongoing support

11. 28% of reported Covid-19 cases in the EU/EEA and the UK have been hospitalised, and among those, 14% required intensive care and/or respiratory support[9]. In England nearly 5,000 patients where Covid-19 was listed as one of their diagnoses required critical care admission and survived for at least 30 days[10]. Of these patients around 20% are likely to have significant and ongoing pulmonary consequences such as pulmonary fibrosis[11] and perhaps 20% will have clinically significant cardiac involvement[4], such as acute cardiac injury, myocarditis, heart failure and arrythmias, particularly those with pre-existing cardiovascular disease[4].

12. To date there have been over 130,000 people admitted to hospital in England with a suspected or confirmed diagnosis of Covid-19 with 67,000 surviving beyond 30 days[6]. Over 270,000 people have been formally diagnosed with Covid-19 but it is estimated that around half of cases are

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[4] Forte et al (2020) *COVID-19 Pandemic in Italian Population.*
[5] Jiang et al (2020) *Psychological impact of COVID-19 epidemic on Chinese people.*
[6] Parker et al (2015) *Posttraumatic Stress Disorder in Critical Illness Survivors: A Metaanalysis*
[7] Garner (2020) *Paul Garner: Covid-19 at 14 weeks—phantom speed cameras, unknown limits, and harsh penalties*
[8] Basu-Ray et al (2020) *Cardiac Manifestations of Coronavirus (COVID-19)*
[9] European Centre for Disease Prevention and Control (ECDC) (July 2020) *Covid Surveillance Report* https://covid19-surveillance-report.ecdc.europa.eu/
[10] SUS+ data, linked to ICNARC and ONS mortality data to May 2020
[11] Paolo Spagnolo (2020) *Pulmonary fibrosis secondary to COVID-19: a call to arms?* The Lancet Vol.8 issue 8

undiagnosed. Current estimates are that between 10% to 35% of Covid-19 survivors have ongoing care and support needs or health issues[12],[13].

13. Data collected through a clinical audit of rehab needs from the Midlands, East, North West and North East of England indicates increased levels of new need following Covid-19, in AHP assessed patients. Most common complaints include fatigue (14-24%), deconditioning/atrophy (12 -23%), reduced mobility, function/activities of daily living, respiratory/shortness of breath, depression, anxiety and PTSD, nutrition/swallowing, musculoskeletal and neurological. Results from the Midlands audit have been provided at Annex A to illustrate findings.

Monitoring and rehabilitation needs

14. Ongoing monitoring and rehabilitation of patients with long-term conditions are important in preventing deterioration which, otherwise, might result in hospital admissions, particularly for those with a respiratory condition in the winter months.

15. The most serious and potentially life limiting complications of Covid-19 such as pulmonary fibrosis, pulmonary vascular disease and cardiac involvement will need identification and referral to respiratory and cardiac services respectively and a small number of patients who have been in intensive care may require specialist rehabilitation.

16. Others may benefit from community-based rehabilitation:
    - A 'Post-COVID-19 holistic assessment' of patient needs in primary care is recommended by Greenhalgh et al (2020) [8]
    - Once fit to leave hospital, patients require access to supported discharge to enable them to get home, followed by community reintegration programmes to support them back to work and other activities. Some will require on-going specialist rehabilitation or generalist outpatient rehabilitation services in the community.
    - Around 10% of Covid-19 survivors experience post-acute disease beyond three weeks, and a smaller proportion defined as chronic Covid-19, lasting beyond 12 weeks[8] . This translates to around 60,000 people in UK with post-acute Covid-19, around six per general practice. A proportion of this group are expected to experience persistent or permanent physical health problems similar to the long term respiratory, musculoskeletal, and neuropsychiatric symptoms that have been described for other coronaviruses (Severe Acute respiratory Syndrome (SARS) and Middle Eastern Respiratory Syndrome (MERS)) which have parallels with post-acute Covid-19.

17. A survey of rehabilitation services for Covid-19 shows that in most localities, existing services are attempting to adapt to accommodate the increase in demand and there are very few new services for these patients. A summary of this survey is found in Annex B.

Action to date

18. In June 2020 the NHS published guidance on the *Aftercare needs of inpatients recovering from Covid-19* which is designed to support primary and community health services to meet the

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[12] Greenhalgh et al (2020) *Management of post-acute Covid-19 in primary care*

[13] Tenforde et al (2020) *Symptom Duration and Risk Factors for Delayed Return to Usual Health Among Outpatients with COVID-19 in a Multistate Health Care Systems Network — United States.* CDC MMWR 2020 / 69(30);993-998

immediate and longer-term care needs of patients discharged following an acute episode. It outlines the most beneficial clinical interventions to address the longer-term physical, neuro-psychological and social impacts of Covid-19.

19. The NHS@Home project plans to carry out in-depth testing and evaluation of clinical pathway and clinical algorithms to support COVID-19 patients in the community with early detection and deterioration using pulse oximetry. Patients with known or suspected Covid-19 who are being managed at home may benefit from monitoring to prevent deterioration requiring admission. NHS England and NHS Improvement has published specific guidance for primary care in monitoring patients with suspected Covid-19 in the community[14] and in conjunction with NHS@Home a series of pilots are running to develop the evidence for a virtual ward model for remote monitoring. This is useful at all stages of COVID-19 infection and for other respiratory illnesses. The rollout of devices and apps to help monitor lung function of thousands of people with cystic fibrosis and others recovering from Covid-19 began in June 2020. Following this, there is potential for national roll-out.

20. Additionally NHS England and NHS Improvement's Respiratory Programme, is, in conjunction with the University Hospitals of Leicester, implementing an online platform called 'Your Covid recovery' for people who have survived Covid-19 but require ongoing support[15]. The first phase of the website went live in July 2020; this is an open, publicly available service containing general information on all aspects of recovering from Covid-19 including physical, emotional and psychological wellbeing. To date there have been over 65,000 individual visitors to the site and 81,000 sessions with multiple page views. Because of a continued investment commitment, Phase 2 will be available in the autumn 2020 and is an interactive rehabilitation programme tailored for individuals with longer term effects of Covid-19 and requires referral and face to face assessment from a healthcare professional. A brief survey of community services (summarised in Annex B) indicates that many are using or planning to use 'Your Covid recovery' for their patients.

21. From August 2020 the Respiratory Programme began funding and coordinating the establishment of local respiratory clinical networks to develop, share and promote best practice clinical care and encourage consistency in the offer to patients. The resource is committed until March 2021 and will need to be reviewed at that time to assess the need for continued investment.

22. Mental health services remained open throughout the pandemic with many services, particularly IAPT, rapidly switching to remote and digital interventions to ensure they could continue providing services. Locally, several initiatives were developed to link mental health services with others supporting those recovering from Covid-19 and guidance and materials were produced to assist affected people. Nationally, a Continuing Professional Development initiative will see IAPT therapists upskilling to support individuals experiencing PTSD. This initiative, enabled by Long Term Plan funding, began pre-pandemic, and NHSEI is working with stakeholders to explore how it can be expanded to support expected increases in the prevalence of PTSD linked to post Covid syndrome.

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[14] https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/06/C0445-remote-monitoring-in-primary-care-v1.pdf

[15] https://www.yourcovidrecovery.nhs.uk/

23. Some local health services are already providing critical care follow-up clinics, and these are typically multidisciplinary. Rehabilitation services are also being adapted to tackle the needs of Covid-19 sufferers. And existing NICE guidance on post-discharge clinical follow up care is regularly reviewed and updated in the context of the emerging Covid-19 evidence base.

Proposed actions to strengthen NHS services and meet new demand

24. Whilst much work is underway, more could be done to help the NHS adapt to this new healthcare challenge. A series of interconnected actions are recommended below.

25. **Review and maintain guidance** NICE has established a plan to continually review and develop a library of Covid-19 specialty guidance which builds on emerging evidence. NHS E/I will work with DHSC to support NICE to maintain this plan.

26. **Care pathways linking physical/mental and/or commissioning approach** The management of post-Covid syndrome should be developed into a commissioned service. Defining pathways of care and packages of support would allow commissioners to ensure joined up care was available for those affected and services tailored to the needs of this cohort of patients.

27. **Roll out community monitoring** Work to advance the NHS@home should continue. Pulse oximeters have been made available to support the launch and testing of this service, with further national stock available for use as needed by the system. We are working with NHS Test and Trace to develop a process to automatically feed positive Covid-19 test results through to virtual wards to help enrol patients more quickly.

28. **Community rehabilitation** As set out in the *Aftercare needs of inpatients recovering from Covid-19* guidance[16], post-Covid patients may require access to a wide range of physical rehabilitation services. This is likely to exacerbate existing shortages in capacity of rehab beds with recent modelling identifying a shortfall of 2,667 beds, and staff available to support the discharge to assess pathway. See the comprehensive spending review section for more.

29. **Mental health** Individuals experiencing 'post-Covid syndrome' may need psychological rehabilitation, and many will benefit from specific 1:1 interventions for depression and anxiety provided by the Improving Access to Psychological Therapies service (IAPT). To effectively support these individuals, integrated pathways between local health services will need to be established, with specific post-covid IAPT interventions. These services will enhance local IAPT LTC pathways and will link into other local rehabilitation services. NHS Long Term Plan funding is already being channelled into services to extend IAPT services for patients. This will go some way to providing services for the increase in mental health support needed over the last five months. However further resource is likely to be needed to support individuals with increased acuity, for example increased prevalence of PTSD, for which NICE guidelines recommend longer treatment courses. See section on comprehensive spending review and Annex D.

30. **Clinical capacity** The increase in demand for long-term Covid support outlined in this paper will mean additional clinical capacity is likely to be required by respiratory teams, but also by intensive care service follow up clinics, pulmonary, cardiac and neurological rehabilitation as

[16] https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/06/C0705-aftercare-needs-of-inpatients-recovering-from-covid-19-aug-2020.pdf

well as mental health services to develop pathways for integrated physical and mental health care for people recovering from Covid-19. The ongoing community rehab needs assessment will provide more detail on what is needed.

31. **Comprehensive Spending Review for mental health and community rehab -** The CSR presents an opportunity to address new service needs for post-covid syndrome, particularly in community rehab and mental health, in preparation for the coming months and years. On community rehab, a proposal to develop a nationwide network of 'Seacole' centres has been developed for consideration under the spending review and is included in Annex C. This proposal would involve each ICS receiving financial support to deliver additional rehabilitation beds where there is an identified shortfall and an increase in rehabilitation at home capacity via a "virtual hub" model. For mental health services, a proposal to develop the clinical capacity and training for such a service, which could treat up to 180,000 people over four years, can be found at Annex D. Delivery of these new services will require additional funding beyond that set out in the NHS Long Term Plan. PTSD is reportedly common among long Covid sufferers and an increase in prevalence of PTSD is anticipated. This could include patients who have experienced a crisis at some point in their illness. A planned IAPT staff CPD initiative will enhance the skills of a cohort of IAPT CBT therapists to treat individuals with PTSD. Work is underway to draw these bids together into a comprehensive offer for patients.

Next steps

32. In order to drive forward actions to address the gaps in healthcare provision for patients suffering long term effects of Covid-19, which are outlined in the previous section, it is recommended that a system wide working group is established to further identify resource requirements and develop a comprehensive clinical and commissioning policy to give the NHS the backing it needs to manage patients with long term Covid.

Annex A – Example of regional audit of rehab services for post Covid-19 patients

Background

A survey was carried out in four of the seven NHS England/Improvement regional footprints (East, Midlands, North West and North East & Yorkshire) to establish the rehabilitation needs of patients with long term symptoms of Covid-19, and to support provider Chief Allied Health Professional Officer's work to assess workforce and identification of any risk associated with unmet rehabilitation needs. This annex summarises the results from the Midlands region survey which was carried out between 8am and 8pm on 7th May 2020.

Midlands results

31 out of 38 providers made a valid return, and the returns provided completed data for 1225 patients. The post-COVID-19 presenting conditions were combined into five groupings of similar conditions as shown in the table below (the percentages show total need by condition):

- Cardiovascular and respiratory, Respiratory including shortness of breath (9.8%), Pulmonary (2.3%), Cardiovascular rehab (1.6%)
- Psychological - Depression/Anxiety/ PTSD (3%), Post ICU syndrome (critical illness polyneuropathy/ myopathy) (1.5%), Cognitive impairment (3.8%), Acute confusional state (4.6%)
- Function and Fatigue - General fatigue (14%), Deconditioning/ muscle atrophy (12.4%), Reduced mobility/falls (14.4%), Reduced function ADL (13.4%)
- Nutrition and Swallowing - Dysphagia/ swallowing difficulty (3.6%), Dystonia/ Voice (1.1%), NG tube care(1.5%), Nutritional Intake (6.8%)
- MSK and Neurological - Neurological disorders (1.1%), Stroke (0.9%), MSK disorders (1.4%)

Rehabilitation needs post covid-19 are complex, due to the multiple co-morbidities that develop. In this survey approximately 75% of patients had between 1-6 newly presenting needs requiring rehab post covid-19. And two patients had 18 out of 19 newly presenting conditions. A complexity score (1 to 5) was allocated to each patient based on the number of groupings their post-COVID-19 conditions fell into. The need was then analysed by main grouping and location of need for each level of complexity.

The location for post-COVID conditions of most need were in-patient acute setting (overall 56.2%, range 49 – 84%). The highest values were for those who had needed medically invasive treatment (e.g. NG tube care, Tracheotomy care). Overall nearly 30% of post-COVID conditions need was for rehab in the community or home environment. This was highest for deconditioning, reduced mobility and functioning, neurological disorders, stroke and pulmonary rehab.

Conclusions

The greatest identified need for rehabilitation post covid-19 was general fatigue, deconditioning/ muscle atrophy, Reduced mobility/falls, reduced function ADL – these accounted for 54.2% of the total need by condition.

This survey would seem to suggest that as the complexity of the patient's condition increases, the location of need shifts from a community environment to an acute bed-based environment.

Annex B - Summary of feedback on the availability of post-Covid-19 services from clinical leads in respiratory services across the country

- Most rehabilitation services are trying to flex to accommodate the additional Covid-19 rehabilitation patients within existing services, using existing workforce. There are very few new dedicated Covid-19 services being established. Some examples are set out in the table below.
- There are a variety of secondary care-based post Covid-19 clinics but mostly for outpatient follow up of hospitalised patients rather than for ongoing rehabilitation, or to meet the needs of patients diagnosed in the community and who have ongoing symptoms.
- Services are accepting patients based on their presenting clinical need and prioritised accordingly as they are being treated by services with existing caseloads of non-Covid patients.
- Antibody testing is not generally being used and is considered not to be useful, although it can be requested. The patients' diagnosis of Covid-19 is accepted if they have been tested positive and/or if they have had Covid-like symptoms.
- Several community services said that they intended to make use of the Your Covid Recovery platform.

New face to face services		
Service	**New service provided**	**Patient numbers**
Buckinghamshire	A 6 week pilot exercise rehabilitation group to address the unmet need for patients recovering from Covid-19 based at Wycombe General Hospital and Olympic Lodge, Stoke Mandeville.	41% of the 138 patients who responded to an inpatient survey indicated a desire for rehabilitation support
Nuffield Health	A 12 week pilot of virtual physical and emotional support to a number of NHS trusts to start in September, with further face to face support in weeks 7-12 available in a fitness and wellbeing centre	Up to 10 patients supported virtually requiring a referral from an NHS assessor.
South Warwickshire Foundation Trust	A service was created to support post-Covid patients as an extension of the outpatient respiratory physiotherapy service. Provides telephone and face to face out-patient consultations and home visits.	Currently received 40 referrals to date
Newcastle Hospitals Trust	Post Covid rehabilitation clinic for patients discharged from hospital. Of 400 admissions 40% did not need follow up. Many patients were fearful of attending in person with a 15% DNA rate for those who agreed to attend. 60% of patients reviewed at the screening stage remained symptomatic. 48% of patients have objective potentially serious longstanding issues; fibrotic lung changes, and vascular changes, as well as other conditions neurological, haematological cardiological and profound psychological which have necessitated onward referral	
Adaptation of existing NHS services		
London	Community Stroke Rehab Group- takes referrals for post Covid patients with neurological consequences of COVID. Majority of patients are younger populations who require fatigue	The numbers are low around 3 referrals to a service, although there is variance, with bigger community providers (CNWL) seeing higher numbers.

	management, vocational rehab and some cognitive/neuro-psychological treatment.	
South West	Patients generally being managed through existing community physical and mental health services. No specific access to antibody testing, and it isn't considered to be helpful	Around 4 or 5 per community service. One Somerset GP practice; population 10,000 has 10 likely post COVID problems per week every week and 4-5x more due to the impact of lockdown and shielding and deconditioning
East of England	Majority of EoE does not have any additional community services to support people with stroke post-Covid. Hospital outpatient clinica are available for patients who were hospitalised. **The Cambridge Breathlessness Intervention Service (CBIS)** has enabled virtual access for people with confirmed or suspected Covid19. **Bedford** is utilising its remote pulmonary rehab (PR) service for post Covid patients. **Cambridge** has an in patient post Covid follow up telephone service but no community provision **West Norfolk –** pulmonary rehab provider is providing a services to post Covid patients without a respiratory diagnosis. Routine antibody testing is not routinely available but can be requested.	**CBIS** service saw 32 patients referred with confirmed or suspected Covid19 between 1 May- 31 July. **Bedford PR service** is supporting 9 post Covid patients on the PR course West Norfolk has taken 13 referrals for post Covid patients with breathlessness and fatigue **North West Anglia rehabilitation** team followed up 305 patients post discharge with confirmed or suspected Covid and found ongoing symptoms of fatigue, breathlessness, memory and mood problems for as long as 100 days post discharge
North West	**Tameside and Glossop** Integrated Care- Utilising rapid response community team and the extensivist team for people with LTCs with more significant respiratory effects of Covid.	
Online services and apps		
Lancaster	An online package of resources tailored to rehabilitation. Open service with no registration requirement or referral	
My m health App	The have added a Covid App as a virtual ward patient management tool. People purchase a registration and support package without NHS input.	

Annex C – SR proposal to expand community rehab capacity

Purpose of bid

Additional funding for rehab support for COVID and non-COVID patients to meet previous demand and growing need. This includes:

- Establishing additional rehabilitation beds in areas where there is an identified need / shortfall
- Providing additional longer-term rehabilitation-at-home capacity for patients discharged from hospital
- Providing increased support to patients who have a rehab need but who have not been admitted to hospital

How does this relate to recurrent funding for discharge & recovery (Bid 1)

Bid 1 (recurrent funding for discharge arrangements & recovery) includes funding for up to six weeks of recovery services (including rehab) for patients discharged from hospital.

This bid builds on Bid 1 by expanding rehab capacity in three areas not covered in Bid 1:

1. **Creating the necessary rehab capacity for patients requiring bedded rehab post-discharge** – some patients no longer require acute care but are not yet safe to discharge home. The accompanying capital bid secures the buildings and beds, this revenue bid secures the people and services that these patients require from rehabilitation in a community facility prior to discharge home. (this bid should therefore be read alongside Bid 1, to ensure this element of funding request is not double counted)
2. **Patients requiring more than 6 weeks of rehab post-discharge** – for some patients the 6 weeks of rehab covered in the discharge arrangements will not be sufficient. It is important that these patients receive the longer-term support required to keep them from being readmitted to hospital. In particular, there is increasing evidence of a "long tail" of COVID rehab needs that the NHS is not currently equipped to support.
3. **Patients who have not been admitted to hospital** – some patients, including but not limited to some COVID patients, will have rehab needs following a period of ill health at home. These patients are out of scope for the discharge arrangements because they have not been admitted (and subsequently discharged) from an acute hospital.

This bid is separate to the Mental Health Rehab bid

Financial ask

	CURRENT SPEND	PROPOSED CHANGE ON CURRENT SPEND (£m)		
	20-21	*21-22*	*22-23*	*23-24*
Expansion of community rehab capacity	TBC	**528.9**	**507.4**	**503.1**

In total, we are asking for **£1,539.4 million over three years** to deliver the substantial increase in rehab capacity required to meet the demand modelled by systems. This funding would deliver a transformation that combines delivery of the additional beds required and increased rehab at home capacity via a "virtual hub" model. This would mean each ICS receiving financial support to develop rehab services that cover a range of support needs and settings (with a particular focus on post-COVID symptoms), with a national programme team overseeing implementation.

The revenue cost of £529m in year 1 is based on delivering additional rehab capacity to 43 STPs/ICSs at an average cost of £12.3m per system. This is premised on the assumption that the average cost per system will be the midpoint between the two models presented: the existing Seacole Centre at Headley Court (revenue costs of £16.1m for year 1) and Frimley's prosed virtual hub approach (revenue costs of £8.4m for year 1). We will work with Strategic Finance to deliver a more accurate representation of cost in advance of the 10th September deadline.

This bid sits alongside an existing capital bid for £207m for 23 Seacole centres (bedded rehab capacity) from 21/22. This proposal would prioritise capital funding towards those areas where there have been historically low levels of community bed capacity.

What will the money be used for

Funding is required to deliver transformation that combines delivery of both the additional beds required, with increased rehab at home capacity via a "virtual hub" model. This would mean each ICS receiving financial support to develop rehab services that cover a range of support needs and settings (with a particular focus on post-COVID symptoms), with a national programme team overseeing implementation. The funding will be used to enhance the holistic and functional rehabilitation of people living with frailty, as well as improving the specialist rehab for patients with complex needs (e.g. neuro, cardio, mental health).

In some systems, where the number of community beds has historically been low, the funding will be used to deliver a step-down bedded rehab centre modelled off the NHS Seacole Centre in Headley Court, Surrey (supplemented by the capital funding outlined above). Bedded capacity is required for the many patients who will leave acute facilities needing care and focused reablement rehabilitation from allied health professionals, community nurses and other healthcare professionals. This bid includes funding for:

- One-off Set-up Costs (incl project management, facilities management, IT infrastructure)
- Direct Staffing Cost (incl clinical, management and admin staff)
- Clinical Non-staff Costs (incl ward supplies and drugs)
- Site Costs (incl estates, facilities, transport and IT)
- Other costs & Overheads

The majority of the operating costs will be spent on staff, with a workforce model comprising of a GP-led multidisciplinary team including nurses, occupational therapists, GPs, junior doctors and social workers.

In other systems, where the need for additional beds is not so acute, the funding will support a model more similar to Frimley's proposed "virtual hub". Which provides a single point of care or community rehab hub services based on a coordinated response to care across the ICS, through enhanced community resilience and better self-management. This bid therefore requires funding for:.

- Increased "Virtual" Rehab Capacity
- Enhanced Response Co-ordination
- Management Costs
- Ensuring Patient Safety

Again, a significant proportion of revenue spend will also be allocated to staff costs. The workforce model will include investment in system wide digital and workforce delivery roles, creating a bank of staff that can support increased care home resilience and recruiting / training additional band 2/3

staff to bring additional capacity into rehab services in the long term. This model also includes a focus on digital enablement (infrastructure, record sharing and analytics) and proportion of the funding is committed to supporting this.

Summarised rationale

- **Pre-COVID, there was already a shortage of rehabilitation beds**, with an estimated additional 2667 beds required; resulting in increased patient waits for rehabilitation, impacting on recovery. COVID has since substantially increased the demand for rehabilitation services, with an NHSE/I planning exercise last month outlining that an additional **3,882 rehabilitation beds are required in England in order to meet current demand alongside the additional demand arising from COVID** – this was based on modelling of capacity / demand developed locally and quality assured through conversations with regional teams. Systems were asked to ensure that all partners (including social care) were involved in developing the estimates, and that any additional beds were consistent with the 'home first' approach in order to increase the number of people able to self-care.
- Funding is therefore required to expand the rehabilitation capacity of existing facilities, ensuring individuals receive rehabilitation as quickly as possible, improving recovery and reducing the likelihood of condition deterioration and subsequent readmission to hospitals.
- DTOC figures from February 2019 show that **delays into non acute NHS care, which includes rehab (category C), was the greatest factor in Delayed Days –** pointing to a lack of capacity, supported by the recent regional reviews. [Further breakdown of bed capacity pre COVID not available] [Waiting times data for specific rehab needs is difficult to provide given the way data has been historically captured]

England Level Data

Type of Care	Reason for Delay	Number of Delayed Days during the reporting period		
		NHS	Social Care	Both
Acute	-	63,796	30,798	8,423
Non-Acute	-	29,237	16,420	7,043
Acute	A) Awaiting completion of assessment	5,970	8,522	2,286
	B) Awaiting public funding	1,014	357	117
	C) Awaiting further non-acute NHS care (including intermediate care, rehabilit	24,577	0	0
	Di) Awaiting residential home placement or availability	3,386	6,240	0
	Dii) Awaiting nursing home placement or availability	7,709	3,943	928
	E) Awaiting care package in own home	7,190	10,209	4,883
	F) Awaiting community equipment and adaptations	1,865	388	209
	G) Patient or family choice	9,749	1,082	0
	H) Disputes	206	57	0
	I) Housing - patients not covered by Care Act	2,130	0	0
Non-Acute	A) Awaiting completion of assessment	1,700	1,436	300
	B) Awaiting public funding	1,158	693	779
	C) Awaiting further non-acute NHS care (including intermediate care, rehabilit	4,140	0	0
	Di) Awaiting residential home placement or availability	3,210	4,992	0
	Dii) Awaiting nursing home placement or availability	2,471	2,318	3,083
	E) Awaiting care package in own home	2,800	4,926	2,456
	F) Awaiting community equipment and adaptations	1,077	312	126
	G) Patient or family choice	5,073	964	0
	H) Disputes	522	259	0
	I) Housing - patients not covered by Care Act	5,897	0	0
	O) Other	1,189	520	299

- In January 2019, the All-Party Parliamentary Group on Acquired Brain Injury (ABI) estimated that three times as many neuro-rehab beds were required to meet demand –300,000 ABI admissions requiring est 14,600 neuro-rehab, in- patient beds – with national figure of c. 4,600 [Further work required to confirm overall figures]
- **There are multiple examples of the additional demand for rehabilitation, that COVID has directly or indirectly caused**. Over 60% of those admitted to adult critical care units require some form of rehabilitation, with the majority delivered in community settings, often by

community and district nurses and AHPs, including physiotherapists and speech and language therapists.

- The rehabilitation required is often quite condition-specific and tailored to the individual. For example, around 60% of individuals who required critical care and ventilation in hospitals due to COVID will require ongoing care and support for post-intensive care syndrome (persistent physical, cognitive and psychological impairments). These individuals will likely require significant, ongoing physical rehabilitation (averaging at 28hrs per package, usually conducted by community/district nurses and AHPs) and critical care follow-up clinics, with onwards referral from there if required.
- A recent survey[17] of the Post-COVID Syndrome Support Group, highlights how long-lasting the effects of the disease can be. 97.4% of patients surveyed were still experiencing symptoms and 84.6% had been experiencing symptoms for 10 weeks or longer. This suggests that **many COVID patients, will have recovery / rehab needs beyond the 6 weeks of post-discharge support proposed in the discharge arrangements (Bid 1).**

Broader benefits of rehab

- **There is a strong evidence base for the benefits that rehabilitation can provide, if delivered in a timely fashion which this bid would result in.** For example, rehabilitation for brain injury has been shown to reduce the need for continuing care and to reduce overall costs, particularly in more dependent patients. **Improvements in outcomes from inpatient rehabilitation for patients who are severely disabled offset the average cost of their rehabilitation** (£41,488) over a period of 156 days in 16.3 months. While these patients still require long-term care, their dependency is reduced, with an average saving in the weekly cost of care of £243. These savings are calculated for a cohort with an average age of 43.3 years, demonstrating a significant lifetime cost reduction in care.
- **There are also broader impacts beyond health and social care- for example, if half of breast cancer survivors who initially return to work but then leave were helped to remain in work, the economy could save £30m every year**. Other evidence found that **enhanced speech and language therapy intervention for young people is estimated to result in an additional 5,500 students achieving five or more GCSEs A*-C** (or equivalent) in comparison with routine speech and language therapy.
- There are also many examples demonstrating that **increasing the provision of rehabilitation intervention can reduce the number of days spent in hospital**, thus reducing costs and freeing bed space for new admissions. An integrated amputee rehabilitation service at Guy's and St Thomas' NHS Foundation Trust (London) reduced length of stay from 40 days to 22 days by giving people with traumatic amputations early access to a prosthetics service. Similarly, for people with a "fragility" fracture, early referral to an orthogeriatrician-led multidisciplinary rehabilitation service enabled patients to have a reduced length of stay in hospital (reducing the mean length of stay from 8.3 to 4.6 days). Savings were projected to be £75m if this service were rolled out across the NHS.

Proposed outcomes of proposal, and metrics to measure

Successful delivery can be measured by an increase in the number of community rehab beds in England, as well as an increase in the number of virtual rehab hubs.

[17] The Post-COVID syndrome support group on Facebook has shared data demonstrating that 97.4% of members surveyed were still experiencing symptoms and 84.6% had been experiencing symptoms for 10 weeks or more.

A significant reduction in waiting list times will also signify success – metrics on measuring outcomes of discharge pathways being developed with LGA, ADASS and Government will capture this data.

Ability to support post-COVID cohort of patients with long-term support needs.

Ultimately the success of this strategy can be accessed via improved outcomes for patients.

Annex D – SR proposal to set up and maintain mental health support offer for those who have ongoing symptoms associated with COVID-19

Enhanced IAPT support offer for those who have recovered from COVID-19, including those who were treated in ICU

Objective

This note shares with HMT a proposal, with associated costings, to ensure appropriate mental health provision is integrated into recovery and rehabilitation pathways for individuals that have recovered from COVID-19, including but not limited to those that were treated in ICU.

Policy rationale and evidence

The longer term impacts of COVID-19, and in particular treatment in ICU, on both physical and mental health are becoming clear in what is commonly being termed "post-Covid syndrome" or "long covid".

Data suggests that at least 270,000 people have experienced COVID-19, with over 110,000 having had a hospital admission for COVID-19. This number is continuing to grow. Analysis to understand long term implications of COVID-19 infection is ongoing, but we are expecting a proportion of this group to go on to experience persistent or permanent physical health problems. In parallel, we expect a number of people to go on to experience persistent difficulties with depression and anxiety, including Post Traumatic Stress Disorder (PTSD), as a result of these physical health changes or as a result of their experiences of COVID-19 and treatment.

Individuals experiencing "post-Covid syndrome" need physical and psychological rehabilitation, and many will benefit from specific 1:1 interventions for depression and anxiety provided by IAPT.

In order to effectively contribute to the psychological rehabilitation of people recovering from COVID-19 in England, and to respond to the subgroup who are also experiencing significant depression or anxiety we must develop specific integrated pathways that link together physical and mental health services required to support recovery. This proposal builds on the foundations of successful IAPT LTC pathways, and enhances them to increase coverage and strengthen links to address the specific and significant challenges experienced by those recovering from COVID-19 .

This proposal includes new posts required to deliver this integrated service. This additional capacity cannot be regarded as core IAPT interventions within IAPT services as they exist today and is not covered within existing budgets. For effective and long-lasting support to be provided new, joined up services are required.

The posts included in this proposal are expansions on LTP workforce commitments to account for increased demand:

- Increased prevalence of depression and anxiety within these populations (whilst some people may have developed depression and anxiety without COVID, and would therefore be included in pre-existing IAPT expansion, there expected prevalence in these populations is expected to be much higher, therefore acting as additional demand)
- Increased acuity in presentation e.g. more people presenting with PTSD
- Additional requirements to create integrated pathways given the complex link between physical and mental health presenting in post-covid syndrome

Given the increased demand, this proposal is critical in maintaining access targets set out in the NHS Long Term Plan.

It is anticipated that this would enhance IAPT LTC pathways and coverage and form part of the NHS local provision for people recovering from COVID-19 as indicated in recent announcements on "Your COVID-19 Recovery" and would be in line with the NHS guidance on after-care of people recovering from COVID.

We are working with commissioners and providers to anticipate increased demand across the system more broadly within existing FYFV and LTP budgets.

Proposal

This proposal sets out requirements to establish and deliver integrated IAPT LTC pathways to effectively contribute to psychological rehabilitation of people recovering from COVID-19 in England and the subgroup who are also experiencing significant depression or anxiety.

The roles and services proposed sit between existing local health and care systems, including physical, clinical psychology teams and IAPT, to create truly connected pathways to support rehabilitation and recovery from COVID-19 and ICU treatment. These efforts may build on and enhance existing IAPT LTC pathways where they are already established, or alternatively may focus on establishing IAPT LTC increasing coverage where there are not pathways in place locally.

These integrated pathways should be linked into services at a local level. Starting at ICS level commissioners and local teams may decide to implement across the ICS, linked to COVID-19 rehab services and each individual IAPT service. Resource can be scaled based on population size.

In order to create and deliver these pathways we have set out two key actions:

1. Build clinical capacity

Additional clinical capacity is required to carry out a range of tasks:

- Work with local health teams (e.g. respiratory teams, Intensive Care Service follow up clinics, pulmonary, cardiac and neurological rehabilitation) to develop pathways for integrated physical and mental health care for people recovering from COVID
- Develop and provide specific uniprofessional and multiprofessional post-COVID-19 treatment programmes for physical symptoms, functional difficulties and associated psychological problems e.g. breathlessness & fatigue interventions, LTC self-management/Coping with COVID)
- Identify people who may benefit from IAPT intervention through use of screening tools and close working with other teams within rehabilitation services
- Facilitate access for those recovering from COVID-19 to IAPT interventions for anxiety and depression provided by the core IAPT service by practitioners trained in the post COVID-19 IAPT interventions

Experienced Senior Clinical Health Psychologists (Clinical Psychologists who have specialised in the psychology of physical healthcare) will be required within the services, providing close liaison with physical health rehabilitation services, existing clinical health psychology teams and IAPT services to ensure an integrated pathway will be delivered. They would clinically lead the input into local acute/community COVID-19 rehab and join up the pathway from COVID-19 rehab into IAPT for those who need it. In addition, they will provide leadership and supervision to other IAPT staff within the pathway and support with delivery of IAPT interventions for more complex interventions.

All the tasks identified could be carried out by the Senior Clinical Health Psychologists, but screening, assessment and delivery of bespoke interventions could also be done by lower band Clinical Health Psychologists or IAPT staff (HI therapists and PWPs) with appropriate additional training. Additional

workforce beyond that set out in the long term plan is required to account for the increased acuity of mental health presentation, e.g. increase in individuals experiencing PTSD, and the resulting increase in treatment course length associated with this. On average IAPT services currently deliver 6 sessions of treatment whilst NICE guidelines recommend 8-12 sessions for PTSD. To meet this increased treatment session demand (specifically linked to COVID-19 recovery) expansion beyond that achieved by the LTP is required.

Given available staff and the most cost-effective use of resources it is suggested that a population of one million should have additional resource as follows. The figure is slightly under the population covered by 1 STP. This service could be modelled around a single IAPT service or provided across IAPT services at STP/ICS level. The resource could then be scaled as needed.
:

WTEs per 1m population	**National WTEs**	**Function**
0.8 Band 8b Senior Clinical Health Psychologist	42	• Work across local Acute Services in existing clinical health psychology team AND IAPT to create integrate pathway • Clinically lead the input into local acute/community Covid rehab and join up the pathway from Covid rehab into IAPT for those who need it • Provide supervision and leadership to other members of IAPT LTC pathway and support with delivery of interventions for more complex cases
2.0 Band 7 Clinical Health Psychologists who have BABCP accreditation	106	• To be employed in IAPT as an additional resource to support rehab pathway in the local acute/community rehab teams • Deliver IAPT interventions to post-Covid IAPT clients – additional posts to account for increased capacity required given increased acuity of presentation
2.0 Band 7 HI CBT Therapist	106	
1.5 Band 5 PWP	80	

These roles are new posts and are to be considered in addition to 2 HI CBT / PWPs in existing IAPT services that may be drawn into this post-COVID recovery pathways in line with plans set out for IAPT LTC pathways in LTP.

2. <u>Deliver specific post-ICU COVID-19 Training</u>

Bespoke training will be required to ensure that all staff working as part of IAPT LTC pathway for people recovering from COVID-19 have the knowledge, skills and confidence to do this effectively and safely. This training can be delivered within existing LTP budgets.

We propose delivery of training remotely, building on many successful models of training that have been developed through the COVID-19 pandemic. This will allow people from across the country to attend training allowing for rapid roll-out and for cohort size to be scaled to accommodate demand.

Training should be delivered to new cohorts quarterly to allow appropriate training of initial workforce through large cohorts during launch, followed by ongoing training for replacement staff coming into the pathways in smaller cohorts.

IAPT clinicians providing and leading the work on COVID-19 rehabilitation/after-care would also share the knowledge and skills with their colleagues in the IAPT service and associated health care teams to upskill teams who may come across individuals recovering from COVID-19 outside of the

pathways. This allows spread of knowledge throughout the system without further funding requirements.

Workforce requirements

The resourcing challenges and funding requirements varies for each of the roles set out above. Proposals have been discussed with colleagues at HEE, but more detailed modelling on specific combinations of supply solutions will need to follow.

1. Band 8b Senior Clinical Health Psychologists

Supply: These posts require experienced Clinical Health Psychologists who have specialised in the psychology of physical healthcare. Given the relatively small number of roles at this level, we expect that they can be filled through:

- Recruitment from existing clinicians within NHS as part of expected movement of senior staff through different roles
- Return to NHS practice for retired practitioners or those in private practice
- International recruitment

Costing: These are new roles and not included in 5YFV and LTP budgets, so costing includes allowance for recurrent salaries the period. There may be some additional costs for recruitment activities, pending HEE review and modelling of appropriate combination of supply solutions.

2. Band 7 Clinical Health Psychologists

Supply: These new posts will be filled with a combination of newly graduating Clinical Health Psychologists and previously trained Band 7 Clinical Health Psychologists (likely with up to 3 years' experience).

We are expecting over 500 graduates to finish in September 2020, of whom around 100 will have completed CBT training making them eligible for IAPT workforce and will have not yet secured a role for the coming year. As with Senior Clinical Health Psychologists, other posts will be filled through a range of supply solutions included above.

Costing: As above, these are new roles and not included in 5YFV and LTP budgets, so costing includes allowance for recurrent salaries for these posts through the period. As clinicians are expected to be new graduates or trained previously funding for core training is not required. There may be some additional costs for recruitment activities, pending HEE review and modelling of appropriate combination of supply solutions.

3. IAPT Clinicians (HI CBT and PWPs)

Supply: In order to meet increased demand linked to acuity additional posts are required. Given nature of the HI CBT and PWP courses this can be achieved through education and training approach. As training capacity in the system is already stretched in year 2020/21 we do not propose additional trainees in this financial year. This means initially as pathways are being developed the service will be led by Clinical Psychologists with support from existing IAPT staff (with some backfill), with IAPT trainees joining from 2022/22. With resource requirements set out above and expected need for replacement, we propose funding to train 110 HI CBT and 110 PWPs in 2020/21 and 25 HI CBT and 25 PWPs in 2021/22.

Costings: As new posts, funding is required to cover course fees and salary support for new trainees into the system and for recurrent salaries through the period after year 1.

Expected impact and outcomes

Precise estimates for numbers of people who could benefit from this service in each location would depend on the exact model adopted.

In year 2020/21 this proposal would allow 3,900 people to access IAPT services nationally. This is based on successful launch in October 2020 and assumes one month for pathway set up, 50% in coverage for the first quarter and a reduced staff compliment, because additional IAPT trainees will not be brought into system until 2021/22.

It is estimated that at full capacity across a population of 1 million people around 550 people would be able to access IAPT support with and around 420 receiving a course of IAPT interventions, either a specific COVID-19 IAPT intervention or standard IAPT intervention with minor modifications for COVID-19, delivered by the specific Covid-19 IAPT staff.

Scaling this up nationally at full capacity, would mean annually 29,000 people assessing IAPT support, with 22,300 receiving COVID-19 specific IAPT interventions. At full capacity this activity is in line with LTP 25% access rate targets. In addition, implementation of this proposal will allow all people using Covid-19 rehab services to access psychologically-informed rehabilitation pathways. Demand for these services could be over 160,000 following April 2020 peak.

This capacity accounts for demand for these services created during and since the April 2020 peak, but also ensures capacity assuming there will be continued background level of COVID-19 roughly experienced today and that there will be at least one future surge of COVID-19 demand within the next year.

These services will be measured using the robust set of metrics defined through the IAPT dataset. This will allow activity and other operational and performance metrics to be tracked relative to other IAPT and IAPT LTC services.

NHS LTP Commitments and longer term impact

This proposal is a critical post-COVID initiative to increase capacity and maintain commitments to access rates set out in the LTP. Without additional capacity, access rates may drop given increased demand and acuity seen in people who have recovered from COVID-19, in particular following ICU admission. This may be an issue until the full staff compliment is in place to implement this plan.

Furthermore, the proposal supports LTP ambitions increasing workforce and enhance commitment to and coverage of IAPT LTC. The links between services created through this COVID-19 specific focus will persist beyond the specific pathways and facilitated joined up working across local health systems more broadly

Without appropriate and joined-up intervention, we expect to see escalations in both mental and physical health needs of individuals recovering from COVID-19 and ICU treatment that will place greater demand and cost on the system, potentially as additional winter pressures or another surge hits. This higher acuity demand increase would have a negative impact on LTP commitments within IAPT and across other parts of the mental health system.

In addition, the focus of workforce requirements (as outlined below) creates new employment opportunities for people who may have lost employment through the pandemic e.g. those in hospitality or services industries. PWP training does not require previous experience in the health sector and many of those that have previous experience in hospitality and services industries, have interpersonal skills to excel in these roles.

Costings and financial implication

The costings below assume the programme is started in October 2020, with initial focus on setting up pathways. We expect 50% coverage in the first quarter, increasing to 100% by January 2020.

Additional funding is required to build capacity through new Clinical Health Psychologist (Band 7 and Band 8b) posts and funding for additional IAPT Trainees. Costs for specific post-ICU and Covid-19 recovery training can be covered from within existing FYFV and LTP funding.

FY	2020/21	2021/22	2022/23	2023/24	Total
Individuals accessing pathway	3,906	19,134	29,604	29,604	82,248
Build Capacity	**£4,249,551**	**£14,707,810**	**£23,076,521**	**£28,262,464**	**£70,296,346**
CHP Salaries	£4,249,551	£11,558,779	£11,789,954	£12,025,754	£39,624,038
Band 8b	*£1,453,898*	*£3,954,603*	*£4,033,695*	*£4,114,369*	*£13,556,565*
Band 7	*£2,795,653*	*£7,604,176*	*£7,756,260*	*£7,911,385*	*£26,067,473*
IAPT (HI CBT and PWPs)	£0	£3,149,031	£11,286,567	£16,236,710	£30,672,308
Trainees	*£0*	*£3,149,031*	*£6,555,853*	*£1,483,444*	*£11,188,328*
Salaries post year 1	*£0*	*£0*	*£4,730,714*	*£14,753,266*	*£19,483,980*
Deliver Training	**£53,900**	**£89,800**	**£89,800**	**£89,800**	**£323,300**
Set-up	£9,000	£0	£0	£0	£9,000
Run course	£44,900	£89,800	£89,800	£89,800	£314,300
Total Proposal Costs	**£4,303,451**	**£14,797,610**	**£23,166,321**	**£28,352,264**	**£70,619,646**
Covered by existing budgets	£53,900	£89,800	£89,800	£89,800	£323,300
Funding requirements	**£4,249,551**	**£14,707,810**	**£23,076,521**	**£28,262,464**	**£70,296,346**

Additional information regarding training costs

Proposed training would build on already tested approach for IAPT LTC top-up training and would include 3 full days followed by five half-day training sessions, update and Q&A sessions provided fortnightly over 3 months. The model of providing training extended over 3 months should enable clinical staff to put the training into practice and reflect with the trainers on the training. This also allows for the developing understanding of COVID-19 recovery and updating of training as required.

Content of training would include:

- Understanding recovery from COVID-19 physical, psychological and social mechanisms and impact
- Pathways and partnerships –how to link with others and provide integrated care in your local system
- Identifying people who could benefit from intervention
- Multidisciplinary interventions - management of symptoms and functional recovery – breathlessness, fatigue, pain, cognitive difficulties, anxiety, depression.
- PWP interventions – breathlessness, COVID-19 self-management programmes etc
- CBT therapist interventions eg fatigue management
- Reclaiming your life – family, employment, social etc.