

Primary Care and Community Respiratory Resource Pack for use during COVID-19

Version: 8 Circulated date: 3 March 2021 Agreed date: 3 March 2021

This document has been reviewed since its last release in July 2020. Please email <u>england.resp-</u> <u>cnldn@nhs.net</u> to request the most recent version.

Disclaimer: Advice has been based on evidence where available and expert opinion where not available and subject to change as evidence becomes available. Variations to this advice may be required depending on clinical setting and individual patients.

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Version control

Version	Date agreed	Date circulated	Amendments agreed
1	27.3.20	28.3.20	N/A
2	6.4.20	6.4.20	 Clarified that Roth Scores are not advised for use in the assessment of COVID-19 symptoms. Updated antibiotic prescription advice in line with NICE guidelines. Updated hot and cold site/zoning principles to support implementation. Included a note that consideration should be given to making reasonable adjustments when providing remote services. Aligned pathway diagrams and content to national symptom assessment categories used by 111 services. Included signposting into the national primary care SOPs and emphasised building links with local acute advice and guidance mechanisms. Aligned guidance with BTS guidance where required Emphasised the need to discuss and complete Advance Care Planning and preferred place of care, including additional signposting to CMC resources. Updated PPE guidance as per most recent PHE guidance. Aligned and updated palliative care to new NICE guidelines. Included references to ethical decision making and palliative care resources Provided further clarity and guidance on the supply and provision of oxygen in primary care, community care, on discharge and within nursing/care homes. Enhanced navigation of documents through improving section ordering, naming and numbering. Additional appendix on CMC resources and breathlessness leaflet Inserted an introduction for section 2 to clarify what care settings this respiratory resource pack is provided for. Small changes to spelling, contributors and grammar. Updated links where new/updated guidance available

3	15.4.20	16.4.20	1. 2. 3. 4. 5. 6.	Emergency oxygen therapy to treat hypoxic patients with suspected COVID-19 within primary care hot sites New guidance on safety netting for follow up of patients suspected COVID-19 Updated guidance on identifying silent hypoxic patients New guidance on safety netting post discharge Alignment to NICE guidelines on ICS and removal of ICS Updates to target saturations admission thresholds, to take into account national and LAS guidance
4	24.4.20	27.4.20	1. 2. 3. 4. 5. 6. 7. 8. 9.	Updated pathway diagram 1 and 2 New pathway guidance for use by care home staff Review of CPR guidance Updated information for follow up on patients with co-morbidities Updated antibiotic treatment guidance to align with NICE Updates and alignment relating to treatment preferences Latest version of questions from ACRX Updated appendix on treatment pathway for those with Bronchiectasis Updated CFS poster Updated Palliative care treatment guidelines
5	12.5.20	13.5.20	1. 2. 3. 4. 5.	Updated guidance on use of oxygen therapy Updates on reuse of EOL medicines, advance care planning Direction to links for verification of death guidance Updated links where required. Management of Homeless Patients on discharge from Hospital Emergency Departments
6	21.5.20	8.6.20	1. 2. 3.	New guidance on how to diagnose other respiratory diseases during COVID-19 Updates to London update to care home staff guidance Updates on virtual wards
7	9.7.20	27.07.20	1. 2. 3.	Updates to align to national guidance on assessment pathway and oxygen sats. Further advice and signposting to guidance on follow up of post-COVID-19 symptoms Update to align to guidance on remote monitoring with examples provided
8			1. 2. 3. 4. 5. 6. 1. 2. 3. 4. 5. 6. 7. 8. 9.	Revised introduction Covid patient pathway – from diagnosis to longer term follow up and support Updated CEV guidance inserted – National pathway Updated information from Primary Care SOP – National document National COVID assessment pathway inserted – National document NEW Covid Remote Monitoring pathways inserted (SElkin/JoS) – LCAG approved Addition of statements on dexamethasone and Anticoagulation treatments – National document NEW ED and ward discharge pathways – National document NEW oxygen discharge guidance (IPatel/KDavies) – LCAG approved Revised oxygen therapy guidance AND addition of oxygen site specific questionnaire Addition of link to care home resource pack and removal of content care homes section (Ezra K/Briony S) LCAG approved Revised Palliative and CoC sections (Caroline S) – LCAG approved Removal of appendix 7 (breathlessness hand out) and 11 (Full NICE tables) (Caroline S) NEW Bereavement section with guidance (Caroline S) NEW Covid follow up section and inclusion of referral form – LCAG approved

Upcoming release schedule and expected content

Version	Expected circulation date	Expected updates
8	9 Feb 2021	ТВС

1. Introduction

Throughout the initial and subsequent waves of COVID-19 in London, the five Integrated Care Systems have mounted an unprecedented response to identify, treat and care for people with COVID19. With the ambition of working as one team across 111, Integrated Urgent Care, Primary Care (both in and out of hours), Community Respiratory Teams, there are many examples of new ways of working for each stage of the patient journey. There are also a large number of stand-alone national clinical guidelines, standard operating procedures and policy documents describing these new ways of working.

The purpose of this document was initially to share emerging clinical and operational knowledge about optimal management of COVID-19 (list of contributors under section 9). The initial authors and contributors have now (Jan 2021) created a document that is a curation of a variety of best practice guides and standard operating procedures from across the country, into one guide for London which is intended to compliment, and in some cases, condense this wealth of information.

Since version 7 of this document, NHS services have been asked to return to business as usual, as well as managing COVID-19. This has inevitably had an impact on the staffing available to deal with COVID-19. This has necessitated the uptake of technology to assist where possible, as well as a greater degree of joint working within and between services.

NB: Out of hospital care settings that have been considered within the scope of this document include general practice, including those sites frequently referred to as Primary Care Hot Hubs, patients' homes, nursing/care homes and other out of hospital facilities such as mental health inpatient units.

2. Patient Pathway overview

Throughout the initial and subsequent responses to the COVID-19 pandemic, clinicians, and the services they work within have developed and revised new clinical pathways and care models to facilitate the best possible clinical management of COVID-19. The pathway below outlines the whole patient journey from the point of diagnosis, initial treatment and follow up support for people with COVID -19. It uses current best practice from national, regional and ICS levels and acknowledges the importance of shared decision making in the development of Treatment Escalation Plans and Advanced Care Plans (ACPs). Implementation of this pathway is dependent upon the level of integration across primary, community and secondary care and is determined locally.



3. Enabling effective, efficient, and equitable access to healthcare services during the COVID19 pandemic – current pathway entry and escalation points for out of hospital settings

3.1. Interface between GP, CCAS and 111 providers

Regions across England have marginally different 111 services depending on their local 111 offer. . The diagram below outlines how 111s currently triage people into the three different cohorts linking in with the National 111 Covid Clinical Assessment Service. (CCAS). For further information on this service please see https://covid19-cas.nhs.uk./ In London, a Starline has been implemented to provide urgent clinical support to Care home staff through triage process. They can Call **111*6** for urgent clinical advice when they require medical assistance, which will link directly with a Clinician in NHS 111.



Figure 2: GP,CCAS and 111 Interface, Primary Care SOP V3.4

There is also recognition of a **fourth cohort** who may have a previous Treatment Escalation Plan (TEP) or recommendation on Co-ordinate my Care (CmC) record. The presence of such discussions/best interest decisions made at the time of COVID diagnosis should be considered

during the Triage process, to ensure these discussions and treatment preferences are understood, and identify where active treatment of COVID is not appropriate/wanted. The outcomes of such discussions and recommendations are recorded on Coordinate My Care - <u>here</u> – or on nursing / care home related documentation.

3.2. Access to rapid Respiratory assessment for patients with suspected COVID-19 in the community across care settings

Whilst access to rapid testing is variable across providers and there is emerging evidence that asymptomatic people can transmit COVID-19 to others, we need to assume all people could be COVID-19 positive. In the context of social distancing policy, it is important to reduce the risk to patients and staff from unnecessary exposure to potential sources of COVID-19 infection. Section 5 of the General Practice SOP (see link to document in 3.2.2) has useful guidance for maintaining the safety, and therefore the sustainability, of their workforce.

Triage and assessment of patients by default, is to be carried out remotely, by telephone or preferably virtual consultation. **If any concerns a face to face review should be arranged in local red areas.** Whilst the general public is encouraged to dial their local 111 service for advice and guidance on how to access the care and treatment they require, many patients will contact their local GP practice for assistance. Thought should be given to high risk groups** who may require access to an oximeter.

Practices and PCNs should ensure patients have clear information about the new ways of working and how to access GP services; this information should be made available in accessible formats to all patients, including those who do not have digital access and those for whom English is a second language. It is important to ensure patients understand that although physical access to their general practice may be managed appropriately under this SOP, they can access help and advice remotely, and will be seen face to face where clinically appropriate. (General Practice SOP, V4)

During this surge it is also vital that **GP escalation hubs/hot site and hours of operation are accurately listed on the 111 Directory of Services (DOS).** This will enable 111 providers to ensure people can be triaged into the right hub for face to face assessment when required.

Previous viral outbreaks have demonstrated that morbidity and mortality associated with reduced access to care can be of equal, if not greater, significance than the impact of the infection itself.

Where necessary we should continue to examine people physically, (taking the appropriate precautions) particularly where this could inform the diagnosis of other acute conditions or risks of deterioration.

Box 1: Guidance on assessment and management of patients with symptoms of COVID-19 and what you need to know

- People with symptoms of COVID-19 can apply for testing via the NHS website or by calling 119.
- Most patients with COVID-19 can be managed remotely with advice on symptomatic management and self -isolation
- Although such consultations can be done by telephone in many cases, video provides additional visual cues and therapeutic presence
- Breathlessness is a concerning symptom, though there is currently no validated tool for assessing it remotely
- Safety-netting advice is crucial because some patients deteriorate in week 2, most commonly with pneumonia
- This document provides guidance on clinical management, on the remote monitoring of patients with symptoms of COVID-19 and management of post-acute COVID-19 in primary care

3.2.1. Remote consultations with patient and or carer

Triage should be carried out by experienced clinicians. The British Medical Journal has published a helpful guide https://doi.org/10.1136/bmj.m1182. Appendix 3 contains the review by the Oxford COVID-19 Evidence Service. It is advised that Roth Scores are not used as part of assessments with patients or carers.



3.2.2. Access to face to face assessments in Primary care settings

Face to face assessment should be undertaken in cases where this is imperative to the assessment and where the benefit of so doing outweighs any risk. An example could include examination of a patient with a suspected acute abdomen. Previous iterations have now been superseded by the *Guidance and standard operating procedures; General Practice in the context of Coronavirus (CV-19) V4*, published 22 December 2020. This SOP can be accessed https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/CO800-COVID-19-Primary-Care-SOP-GP-practice_V4.pdf

When assessing patients face to face, ensure careful consideration is given to protecting staff and patients from risk of infection. Practices should co-ordinate care so that as much as possible is done in a single consultation, and use careful appointment planning to minimise waiting times and maintain social distancing in waiting areas.

3.2.2.1. Configuration of sites

When face-to-face assessment is clinically appropriate, consider the following options for cohorting patients, premises and workforce to separate those with symptoms of COVID-19 from all other patients:

- Separate patient cohorts across a PCN
- Separate patient cohorts across a PCN footprint, using designated GP practices or other sites as 'hubs' for managing different patient groups.
- Separate patient cohorts within practices, using designated areas and workforce.

Avoid using GP practices that are co-located with pharmacies to deliver services to patients with symptoms of COVID-19. If this is not possible, cohorting with strict infection control and cross-contamination protocols must be in place between the GP practice and the pharmacy. If physical separation between the community pharmacy and GP practice in a co-located site cannot be maintained, this should be reported to the NHS England and NHS Improvement regional team, who will assess the impact.

Patients, communities and local systems (including NHS 111, DoS leads, pharmacies, community, mental health and secondary care services) should be kept up to date with changes to the configuration of general practice. We have published guidance on using DoS to report general practice capacity.

The Care Quality Commission (CQC) may need to be informed of changes to services: for example, if hubs are set up to review patients with symptoms of COVID-19. Guidance on registration and general practice focused advice is available on the CQC website.



Care Pathways

The guidance includes examples of three care pathways that have been structured to enable organisations to separate COVID-19 risk at a local level and enable service restoration:

High-risk	Medium-risk	Low-risk
Any care facility where: untriaged individuals present for assessment or treatment (symptoms unknown)	Any care facility where: triaged/clinically assessed individuals are asymptomatic and are awaiting a SARS-CoV-2 (COVID-19) test result	Any care facility where: triaged/clinically assessed individuals with no symptoms or known recent COVID-19 contact who have isolated/shielded
OR	with no known recent COVID-19 contact	AND
confirmed SARS-CoV-2 (COVID-19) positive individuals are cared for OR symptomatic or suspected COVID-19 individuals including those with a history of contact with a COVID-19 case, who have been triaged/clinically assessed and are awaiting test results OR symptomatic individuals who decline testing	OR testing is not required or feasible on asymptomatic individuals and infectious status is unknown OR asymptomatic individuals decline testing	have a negative SARS-CoV-2 (COVID-19) test within 72 hours of treatment and, for planned admissions, have self-isolated from the test date OR individuals who have recovered from COVID-19 and have had at least 3 consecutive days without fever or respiratory symptoms and a negative COVID-19 test OR patients or individuals are regularly tested (remain negative)

The pathways can be applied to any health or care setting and there are some examples given within the guidance such as maternity or emergency care. The examples given should not be seen as defining that service to the particular pathway and it is important that this does not define the delivery of the care for the duration of care needs of the individual.

Figure 4: IPC Highlights Quick Reference Guide.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attach ment_data/file/918091/IPC_Highlights_Quick_Reference_Guide.pdf

3.2.2.2. Preparing sites for patient visits

Please refer to the Health and Safety Executive guidance <u>here</u> on making your workplace COVID-secure, and government guidance on working safely during coronavirus (COVID-19).

The following advice may also be helpful:

Face coverings - government has published advice on the use of face masks and face coverings by staff and the public in primary care. The safety of both our staff and our patients is of paramount importance and face coverings or face masks should be worn by patients in a practice setting, in line with government guidance. We expect that all patients who are able to do so will follow these recommendations.

For the small number of patients who may not follow this guidance, we fully support practices in ensuring that they can take all reasonable steps to identify practical working solutions with the least risk to all involved. Practices should undertake a risk assessment which should consider, for example:

- booking the patient into a quieter appointment slot, or one in a separated area
- providing care via a remote appointment

Symptomatic patients may be given a surgical face mask to minimise the dispersal of respiratory secretions and reduce environmental contamination. In all cases, please follow the infection prevention and control guidance <u>here.</u>

3.2.3. Face to face visits at home, or in nursing/care home settings

For home visits, the number of healthcare professionals visiting the patient's home should be limited as far as possible. Where possible, liaise with the wider community care team looking after the patient to ensure that the visit is carried out by the most appropriate professional.

Any healthcare professional who visits the patient should consider whether they can perform duties of other team members to avoid multiple visits. Follow infection prevention and control guidance and be aware of any additional precautions required (e.g. if the patient is on home non-invasive ventilation); ensure visit bags contain necessary PPE. PPE waste can be left behind in a bag and stored for 72 hours before being put into the patient's domestic waste stream, as set out in the COVID-19 waste management SOP.

For residents of care and nursing homes, access to an assessment for COVID-19 will usually be via the lead GP for the specific site (where these contacted arrangements exist) 111 or their registered GP. For assessment and best practice treatment for this clinically extremely vulnerable cohort please section 6.2 of this guide.

4. Personal Protective Equipment (PPE)

For guidance on the latest advice for the use of PPE and infection control please see:

Figure 4: Need reference

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/9 10885/COVID-19_Infection_prevention_and_control_guidance_FINAL_PDF_20082020.pdf

PPE requirements are based on the patient pathway care setting, as described in Figure 5 on page 13.



¹Extended use of face masks in England/Scotland for HCW when in any healthcare facility. ²FRSM can be worn sessionally if providing care for COVID-19 cohorted patients.

Transmission of work assistments in providing care for Covid-12 control patients. "Airborne precautions are NOT required for AGPs on patients/individuals in the low risk COVID-19 pathway, providing the patient has no other infectious agent transmitted via the droplet or airborne route.

Figure 5: IPC Highlights Quick Reference Guide.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachme nt_data/file/918091/IPC_Highlights_Quick_Reference_Guide.pdf NB:

- PPE guidance needs to be followed with care in all situations.
- To protect the workforce, staff should be risk assessed and risks mitigated as required. For further guidance on infection control and keeping workforce safety guidance please see sections 4 and 5 of the Primary Care SOP, V4.
- Workforce capacity constraints means pooling of staff may be required

More specific PPE recommendations for social care workers in community and social care settings are given in this poster

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/9 25605/PHE_PPE_illustrated_guide_for_community_and_social_care_settings_OCT_2020.pdf

5. Aerosol Generating Procedures (AGPs)

Aerosol generating procedures (AGPs) should not be performed during any home visits as aerosols generated by medical procedures are one route for the transmission of the COVID-19 virus. The following procedures are considered to be potentially infectious AGPs:

- Intubation, extubation and related procedures
- Tracheotomy/tracheostomy procedures
- Manual ventilation
- Open suctioning and induction of sputum with nebulised saline
- Non-invasive ventilation (NIV) e.g. Bi-level Positive Airway Pressure (BiPAP) and Continuous Positive Airway Pressure ventilation (CPAP)

Certain other procedures/equipment may generate an aerosol from material other than patient secretions but are not considered to represent a significant infectious risk. Procedures in this category include:

- Administration of pressurised humidified oxygen
- Administration of medication via nebulisation.

During nebulisation the aerosol is created from the liquid medication in the medication chamber and does not carry patient derived viral particles. If a particle in the aerosol coalesces with contaminated mucous, it will be too dense to become airborne and therefore will not be part of the aerosol. Advice from PHE and HPS is that nebulised therapy is NOT considered to be a 'viral' aerosol generating procedure https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe

Alternatively, large doses of bronchodilator can be delivered with a large volume spacer (4 -10 puffs salbutamol). Staff should use appropriate hand hygiene when helping patients to remove nebulisers and oxygen masks.

Spirometry can cause cough which is aerosol generating. We therefore recommend that the model of spirometry moving forwards is within integrated diagnostic spokes to reduce exposure, cost for PPE and training. Further information on diagnosing Asthma and COPD using Peak Flow can be found in section 12.1 of this document.

5.1. Cardiopulmonary Resuscitation

Please refer to any established records of cardiopulmonary resuscitation recommendations that may be present in home or recorded on other systems including Coordinate My Care. **We advise that as in all basic life support situations, the clinician carries out a risk assessment first**. The government's guidance for first responders states:

"If you are required to perform cardiopulmonary resuscitation (CPR), you should conduct a **risk assessment** (in the Police this would be a "dynamic risk assessment") and **adopt appropriate precautions for infection control**. Where possible, it is recommended that you do not perform rescue breaths or mouth-to-mouth ventilation; perform chest compressions only."

Although there has previously been dissonance between PHE and the Resuscitation Council UK guidance around the need for PPE for AGPs during Cardiopulmonary Resuscitation, their positions have now moved closer with a PHE update (above) and a <u>statement by RCUK</u>. Current advice from PHE based on assessment by NERVTAG consensus statement is that it "does not consider that the evidence supports chest compressions or defibrillation being procedures that are associated with a significantly increased risk of transmission of acute respiratory infections." However, PHE goes on to add: "Healthcare organisations may choose to advise their clinical staff to wear FFP3 respirators, gowns, eye protection and gloves when performing chest compressions but we strongly advise that there is no potential delay in delivering this life saving intervention."

6. Supporting clinical decision making in the identification and monitoring of COVID-19 in primary and community care settings

This section provides clinicians with guidance on best practice management of patients with COVID-19 based on a thorough assessment of symptoms and case history. It covers treatments that have been demonstrated to achieve the best outcomes for people with COVID- 19, ensuring assessment, monitoring and subsequent treatment is appropriate in regard to an individual's preferred setting of care.

6.1. Case Definition of COVID 19

Public Health England (PHE) has the latest case definition of COVIV-19.

6.2. Clinically Extremely Vulnerable (CEV)

People who are defined as clinically extremely vulnerable are at very high risk of severe illness from coronavirus. There are 2 ways people may be identified as clinically extremely vulnerable:

- 1. They have one or more of conditions listed in the updated guidance, or
- 2. A clinician or person's GP has added the person to the Shielded Patient List because, based on their clinical judgement, they deem the patient be at higher risk of serious illness if they catch the virus.

For guidance on different groups of people who are considered clinical extremely vulnerable please see latest government advice that is regularly updated <u>here</u>.

6.3. The patient pathway for assessment, triage and monitoring of people with suspected or confirmed COVID-19

The information previously contained in this section has been superseded by new National best practice and emerging Regional mandates to meet very high levels of demand across all services. In response to wave 1, services have been designed and implemented using local knowledge and existing levels of integration across local systems. And, of course, levels of demand. Whilst they are all underpinned by National best practice, there is recognition that services are at varying stages of development and are working together to ensure existing gaps in knowledge or provision are being addressed.

At all points of patient contact, teams are reminded to undertake a 'Post-COVID-19 holistic assessment' of patient needs, including consideration of Clinical Frailty Scale / co-morbidities in order to determine the most appropriate pathway. Is a conversation about end-of-life care planning appropriate? Should the palliative care team be involved? It is appreciated that while these conversations would usually happen face to face, they will now need to take place over the phone or in video consultation as will any psychological support. It is recommended that regular team meeting/buddy conversations are held to support clinicians in these challenges.

6.3.1. Categorising patients with COVID-19 symptoms Primary care

The National Adult Primary Care COVID 19 assessment pathway has been developed to aid clinical decision making and triage for individual cohorts of patients, depending on their risk profile and presence of silent hypoxia.



/See also: https://www.cebm.net/covid-19/what-is-the-efficacy-and-safety-of-rapid-exercise-tests-for-exertional-desaturation-in-covid-19/

Figure 6: NHS England Remote monitoring in primary care (revised)

When assessing people using the triage guidance in Figure 6, there are some further factors that need to be taken into account.

- Consideration should be given to making reasonable adjustments with telephone and videoconferencing for people who may find these interactions challenging. These groups may include people with learning difficulties, autism, dementia, serious mental illness and those for whom English is not their first language. Where possible it is suggested that interactions are supported by people who know the individual well such as the local Community Learning Disability Service, their Community Mental Health team, carers and relatives.
- Consideration should be given to the person's current preferences, and previous discussions and recommendations in relation to Advance Care / Treatment Escalation Planning, preferred place of care etc. This is particularly relevant for those with co-morbidities, the clinically extremely vulnerable and those in nursing / care homes. The outcomes of such discussions and recommendations may have been recorded on Coordinate My Care <u>here</u> or on nursing / care home related documentation. These should be considered during the Triage process as well as undertaking shared decision making with the patient and/or those important to them about their current preferences / best interests in relation to management and location of care.
- It is also recognised that exertional desaturation is a clinical indication for identifying patients at higher risk of deterioration. People on a COVID Oximetry@home pathway should be assessed for exertional desaturation. People can be assessed for this either through a 1 minute sit to stand or 40 steps. <u>https://www.cebm.net/covid-19/what-is-the-efficacy-andsafety-of-rapid-exercise-tests-for-exertional-desaturation-in-covid-19/</u>) Review patient's full responses to exercise, including RR and HR as well as desaturation.

For advice re: mild or moderate symptoms, patients / carers|should be directed to the link below: <u>https://www.nhs.uk/conditions/coronavirus-covid-19/</u>.

6.3.2. COVID Remote Monitoring pathways for London

In November 2020, the National Incident Response Board (NIRB) approved the Oximetry@home SOP to enhance access to remote monitoring services. Local systems need to ensure timely referral of patients that may meet the entry requirements from all relevant providers operating within their area, e.g. NHS 111, Covid Clinical Assessment Service (CCAS), Test and Trace and hospital emergency departments.

- Arrangements will vary depending on how the pathway is delivered, for example, through individual Primary Care Networks or a single Community Health Service.
- Patients should be advised to self-isolate in line with current guidance.

https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/11/C0817-sop-covidoximetry-@home-november-2020.pdf

Since the publication of this guidance, London has seen healthcare demand increase exponentially. To enable health services to manage this demand effectively, there are two COVID Remote Monitoring pathways being rapidly rolled out across the region; one led by primary care, and the other led by acute care to facilitate safe discharge from ED or ward-based care. This work is informed by the NHS London 4 actions paper, published on the 7 January 2021 that set our four actions for healthcare services to take that would;

- Increase roll out of GP led Oximetry @ home and Covid virtual wards
- Optimise uptake of remote monitoring to safety net to **improve early detection of deterioration**
- Help people to be able to self-manage their condition safely at home and know when and how to get help
- Implement systems and processes that **ensure appropriate identification of the right patients** who need face to face assessment by a senior clinician, some who may require diagnostics
- Senior specialist support as required through COVID Specialist Advice line

The onboarding process for both pathways should include provision of a patient held escalation plan that should assist remote assessment by 111/999/CVW team and help reduce inappropriate readmission / reattendance. The London expectation is that;

- All acute NHS Trusts implement an Early & Supported Discharge Guidance Tool (see page 26) for assessing adults with confirmed or suspected COVID-19 based on blood oxygen saturations.
- All CCGs ensure that all appropriate patients have access to a 'COVID Virtual Ward' (CVW) service to enable correct escalation of adults with confirmed or suspected COVID-19

The table below outlines the difference between each model of COVID Remote monitoring, and whilst this section details COVID Oximetry@ home, further information can be found in section X on COVID Virtual Ward model.

	'COVID Oximetry @home'	'COVID Virtual Wards'
WHERE	Primary care supervised	Hospital supervised
WHO	Low acuity / complexity	Higher acuity / complexity
WHEN	Community diagnosed patients	Emergency hospital patients
AIMS	Safe admission avoidance	Supported discharge +/- early Safe re-admission avoidance
HOW	Patients self-monitoring/escalation Earlier deterioration presentation	More intensive monitoring Reliable deterioration recognition
WHAT	Supportive treatments	+ /- dexamethasone/oxygen/other

Table 1: Difference between Covid Oximetry@home and Covid Virtual Ward care models. Taken from <u>https://www.england.nhs.uk/coronavirus/wp-</u> content/uploads/sites/52/2021/01/C1042-sop-discharge-covid-virtual-ward-13-jan-21.pdf

6.3.2.1. GP - led COVID Oximetry@home

Following the publication of the COVID Oximetry@home Standard Operating Procedure (SOP) cascaded to all CCGs 12 November 2020, COVID Oximetry@home is a **primary care based pathway** for lower acuity patients who are required to 'self-monitor' with background clinical risk factors and escalate if their oxygen saturations fall below 95% and who have generally not been admitted or assessed by secondary care (unless a red SDEC is in place as per Action 3, option 1).

Below is the minimum criteria required for safe operation of the service. All systems are expected to be able to deliver the below service consistently, with clear interfaces between relevant service providers, to ensure comprehensive safety-netting for patients across all London boroughs.

Identification and recording of appropriate patients:

- Ability to consistently identify the appropriate cohort across entire population
- The COVID Oximetry @home pathway should be available to people who are:
 - i. Diagnosed with COVID-19: either clinically or positive test result AND
 - ii. Symptomatic AND EITHER
 - iii. Aged 65 years or older OR
 - iv. Under 65 years and clinically vulnerable to COVID. (The Clinically Extremely Vulnerable to COVID list should be used as the primary guide. Clinical judgement can apply and take into account multiple additional COVID risk factors such as comorbidity, pregnancy, BAME background etc)
- Patients should be considered to join the Oximetry @Home pathway if they do not meet the above criteria but have:
 - o oxygen saturations of ≥95% with additional risk factors, having been assessed face to face by a GP
 - oxygen saturations of 93-94% and no additional risk factors, having been assessed face-to-face by a GP with an exclusion of other risks and consideration of the need for additional diagnostics
 - Patients who have oxygen saturations of 93-94% and additional risk factors or desaturation should be assessed within an ED/SDEC before the appropriate pathway is selected – the senior clinical decision maker will determine if they are suitable for the community @home pathway or whether they should join the acute-based pathway via the COVID Virtual Ward

Onboarding

- Timely referral of patients that meet the entry criteria in-hours
- An agreed safety-netting process out-of-hours with prompt handover to GP/community service in hours
- Issue of pulse-oximeter alongside usage guidance, patient diary, details of follow up calls and information of what to do in case of deterioration
- Sufficient supply of pulse oximeters for distribution
- Ability to flag patients being remote monitored to other services (such as 111 providers/LAS)

Monitoring

- A service where suitable patients can self-report their oximetry reading/symptoms
- Patients receive text or email prompts or check in calls, as agreed during onboarding, on pre-determined days. An example of a virtual ward diary is provided in Appendix 5.
- Clinical oversight of patient saturation information to identify any deterioration or other warning flags

- Clear escalation process in hours and out of hours including prioritisation of incoming calls to GP/COVID @home service for immediate response to detect deterioration
- Provide designated by-pass numbers to enable warm transfer of patients from other service providers
- Enable interoperability and access to designated appointments in hours via GP connect or other

Box 2. safety netting guidance for GP and oximetry@home

- Low risk General advice and call NHS 111 if symptoms deteriorate. Some patients may be suitable for purely verbal/written safety-netting, others may require calls. Use of clinical judgement and shared decision making is advised.
- Medium risk Follow up with daily phone call via hot sites or GP to assess change in level of breathless at rest and with usual activity. Daily pulse oximetry (either supply patient with pulse oximeter or set up Mobile pulse oximetry service ensuring decontamination between patients). Refer to secondary care with deteriorating saturations or if desaturating with exertion after conferring with colleagues (1 min sit-to-stand or 40 step walk - <u>https://www.cebm.net/covid-19/what-is-the-efficacy-and-safety-of-rapid-exercise-tests-for-exertional-desaturation-in-covid-19/).
 </u>

Discharge from follow up if symptoms improving and oxygen saturations stable or improving over 48 hours and treat as low risk

Discharge

- Patient should remain on the CVW for 14 days. They should then be discharged from pathway with agreed next steps. If concerns remain, face to face review is advised.
- Return of oximeter for cleaning and reuse
- Primary care patient follow-up after 6 weeks and CXR 12 weeks if still symptomatic
- Removal of patient flag from other services (such as 111 providers/LAS)

Governance

- London has mandated that there will be secondary care COVID telephone advice line for primary care colleagues to access Respiratory or Acute physician advice to inform Treatment Escalation Plans (TEP) 7 days a week, 8am – 8pm.
- Clinical governance and accountability in place across all relevant providers including GP, hot hub/other service, 111 providers
- Data collection, monitoring and submission in-line with national requirements in order to evaluate usage of service and further manage system pressures
- Ensure health inequality assessment undertaken for local services
- Align with COVID Care @home guidance

6.3.2.2. COVID Virtual Ward model

The COVID Virtual Ward (CVW) model is a secondary care led initiative to support discharge of confirmed or high suspicion of COVID-19. People can be onboarded to this model of care from two different points on their COVID 19 treatment pathway.

- 1. Early supported discharge from emergency department or acute admission wards : these patients are often earlier in symptom journey and at risk of deterioration and readmission.
- 2. Supported discharge from the wards after 10 days: These patients are later in their illness trajectory and may be recovering from ITU or level 2 care. Supported discharge should be considered for adults in hospital with confirmed of suspected COVID-19 who have an improving clinical trajectory (symptoms, function, oxygen saturation) and have no fever for 48h consecutively (without medication to reduce fever). For further information on supported discharge pathways please see Section 7 of this document.

CVW has already been implemented in some, but not all, parts of London and has built upon the National evidence base. NHS London is working in partnership with ICS operational and clinical leads to enable equitable implementation of the COVID virtual ward model across the Region. The national SOP for COVID Virtual ward can be accessed <u>here.</u>

The key difference between COVID Oximetry @home and the COVID Virtual Ward is these patients are post hospital admission/ attendance and may have higher risks or complex needs. Supervision is from secondary rather than primary care, with daily calls and potentially ongoing treatments initiated in hospital. Covid virtual ward is not a hospital at home service it is an enhanced safety net service with remote monitoring. Ongoing care otherwise continues under their own GP & community services.

Covid Virtual Ward Service Requirements

As a hospital-led initiative, and a safe alternative to hospital-based care, the default expectation is the monitoring and enrolment service will be provided by Acute NHS Trusts. It will be for CCGs (acting as the 'place based' out-of-hospital leadership of the ICS) to determine the best local delivery arrangements to implement the CVW model working with their local acute NHS Trusts with flexibility to develop alternative local arrangements should they wish.

Based on existing services, providing a safe and robust COVID Virtual Ward ideally requires staffing for at least 12 hours a day (8am-8pm) seven days a week with locally arranged provision of out of hours cover. It may not be possible to provide these hours given the staffing pressures within Trusts. Local systems should consider how the service could be tailored to meet the demands of the service in a safe and effective way with the resources they have available.

- Patients are given a telephone number to call for any advice or support required during these hours.
- Proactive daily calls should occur as required (up to 3x day).
- The COVID Virtual Ward is led by a named consultant or ST3+ doctor with relevant COVID experience (usually an acute or respiratory physician).

It will be for individual ICS/ CCGs to determine if they wish to enhance the model with appbased reporting and monitoring with support from NHSX. There are multiple examples of how digital innovation is enabling the delivery of virtual ward models of care. There should be the ability to flag patients being remote monitored to other services (such as 111 providers/LAS).

If patients under CO@H are seen in ED or admitted to hospital the patient may be followed up by CVW rather than GP team and this would be communicated to GP

It should be noted that some lower acuity patients that are discharged from ED may be transferred to Local CO@H pathways. Likewise stable patients from wards may be discharged to usual GP care if not felt to be in need of enhanced monitoring on discharge

6.3.3. National Care Home COVID Assessment Pathway

The pathway below has been developed as a guide by the NHSE/I national team. It should be noted that clinical judgement may supersede guidance if appropriate



Figure 7:National care home assessment pathway

A multi-agency forum in the London region has produced the London <u>Care Home Resource Pack</u> that should be read in conjunction with the National pathway above.

6.3.4. Pathways for patients with PRE-EXISTING lung conditions or comorbidities

Asthma – COVID-19 can present with symptoms similar to an asthma attack such as cough and shortness of breath. However, it is worth letting patients know that it is uncommon to get a high temperature and changes in taste or smell with an asthma attack so the presence of these symptoms are more likely to suggest infection with SARS-CoV-2.

Most patients with asthma have mild to moderate disease and normal underlying lungs. They should be treated for wheeze or bronchospasm in a conventional manner. If they have a peak flow meter at home, they can monitor this themselves. They can be given one for self-monitoring if they

have mild/moderate COVID-19 symptoms. The management of asthma exacerbations is unchanged, and patients should NOT stop taking their ICS containing inhaler. Patients should be advised to take their medication as guided by their personal asthma action plan including oral corticosteroids and contact their GP surgery to organise a telephone, video or face-to-face consultation. If a course of steroids is clinically indicated (symptoms and signs of bronchospasm/wheeze), it should not be withheld. Antibiotics are only advised if sputum changes colour, thickens, or increases in volume.

The physiological parameters from the Moderate Category in Figure 6 should apply to asthmatic patients as to others when considering admission for COVID-19 symptoms.

https://www.brit-thoracic.org.uk/document-library/quality-improvement/covid-19/bts-advice-forhealthcare-professionals-treating-patients-with-asthma/

COPD – Where a patient with COPD develops increased cough or increased breathlessness in keeping with an acute exacerbation, this should be treated as such and they should take their appropriate rescue medication. Oral corticosteroids can also be considered if the patient has concomitant asthma and / or history of raised eosinophils ≥ 0.3 or known steroid responsiveness. Some patients will seek further discussion with a healthcare professional. Before prescribing steroids, ensure you are advising that the control of symptoms with increased bronchodilator therapy, breathing control exercises and pacing, where appropriate. Oral corticosteroids should be avoided in COVID-19 suspected infection (as suggested by fever or new cough that is different from usual).

Consider admission according to algorithm physiological parameters but if baseline pulse oximetry saturations are available:

- Mild deterioration would be defined as up to 2% below the patient's baseline at rest
- Moderate deterioration would be defined as between 3-4% below their baseline
- Severe deterioration would be defined as more than 4% below their baseline

If the patient is on Long Term Oxygen Therapy (LTOT) undertake shared decision making and consider /discuss Treatment Escalation Plans/Advanced Care Plans. This may be recorded on Coordinate my care of other nursing/care home records. Where appropriate consider admission if their oxygen saturations are <88% on their standard dose of LTOT.

The British Thoracic Society have produced guidance on the management of COPD patients with COVID-19 (<u>https://www.brit-thoracic.org.uk/document-library/, quality-improvement/covid-19/copd-and-covid-19-for-healthcare-professionals/</u>). For additional guidance on Interstitial Lung Disease, Obstructive Sleep Apnoea, Bronchiectasis please see Appendix 7.

7. Discharge criteria from ED and hospital ward - based care for COVID-19

The circumstances of each discharge will vary but it is expected that patients may have residual symptoms of breathlessness and potentially hypoxaemia on discharge. They should receive telephone or video follow-up from primary care or specialist community respiratory service if available according to local arrangements.

https://www.england.nhs.uk/coronavirus/secondary-care/discharge/

If patients require review post discharge from secondary care please follow PHE guidance regarding isolation of the patient.

https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-households-with-possible-coronavirus-covid-19-infection

Patients requiring care at home on discharge should all have had COVID testing which should be communicated with the care team and appropriate PPE should be worn. <u>https://www.gov.uk/government/publications/coronavirus-covid-19-providing-home-care/coronavirus-covid-19-provision-of-home-care</u>

Some patients may be discharged from ED/ hospital because they have not responded to hospital based care and/or a shared decision has been made that s/he should receive end of life care in their usual place of residence. A careful coordinated discharge is essential with the following:

- Prescription of appropriate parenteral medications for symptom control, and their authorisation on the pan-London Symptom Control MAAR chart
- Referral to Community Specialist Palliative Care and District Nursing Teams
- Referral to Continuing Health Care for Fast Track Funded package of care
- Coordination of practical equipment when needed (eg commode / hospital bed)
- Close liaison with General Practitioner

7.1. COVID-19 guidance on safety netting post-discharge from hospital for different care settings

Patients can be discharged into COVID Virtual Ward, COVID Oximetry@ home monitoring or self-care at home from a variety of acute care settings, including ED, SDEC or ward based care. All patients attending ED with confirmed COVID-19 will require GP review in 6 weeks and a CXR arranged if this was recommended by ED or if still symptomatic.

Discharge from ED attendance:

Patients can be discharged from ED and referred to;

- GP led remote monitoring/oximetry at home (see page 18)
- COVID virtual ward (see page 21)
- Home

ED discharge guidance has been produced in Figure 8 below to support clinical decision - making on discharge from ED to the best COVID Remote Monitoring pathway for the person.

Emergency Department guidance for referral into COVID Oximetry @ Home OR COVID Virtual Ward



Figure 8: Guidance for Emergency Departments on COVID Remote Monitoring referral pathways

Discharge from hospital admission

For people to be considered appropriate for early supported discharge, or supported discharge with COVID Virtual Ward, the following clinical guideline has been developed to support clinical decision making and effective risk management using what is now known about disease trajectory and likelihood of further deterioration.

NHS London has built on this guidance and advise the following level of detail to further support people being discharged into either COVID Remote Monitoring pathway (see section 6.3.3)

Patients who meet these criteria with oxygen saturations of:

- 95% or higher maybe suitable for <u>nurse-initiated</u> discharge onto the COVID Oximetry @home pathway (section 6.3.2.1)
- 93% or higher maybe suitable for <u>physician-led</u> discharge onto a COVID Virtual Ward @home pathway (section 6.3.2.2)
- 92% or lower are generally unsuitable for early supported discharge (unless this is their baseline oxygen level) but maybe suitable later on in their disease trajectory

The London clinical advisory group (LCAG) has also approved the following ward discharge guidance to support the safe discharge and safety netting for all patients, including those who may be suitable for referral to COVID Virtual Ward.

To support the roll out of CVW, the national team has made oximeters available (with an opt out) directly to Trusts, ensuring there is a clear pathway underpinned by appropriate clinical support. Oximeters are available in batches of 100 and can be ordered through the following email address: england.home@nhs.net.

ICS operational and clinical leads are also asked to consider and whether there are appropriately experienced doctors within the system who could support, such as GPwSIs, acute physicians or GPs who have worked in ED's. They would have to have acute COVID experience due to the acuity of these patients.

Ward discharge guidance for adults with confirmed or suspected COVID-19 and referral to COVID Virtual Ward

1. Identification of patients potentially suitable for discharge (>	• day 10 from symptom onset) 💫 🕂 🚠 🚽
 Improving clinical trajectory (symptoms, function, oxygen saturations) No fever for 24-48h consecutively without medication to reduce fever If NEWS Score stable (0-4) : Oxygen saturations _95% : may be nurse initiated discharge Oxygen saturations <95%: clinician led discharge 	
2. Clinician review to authorize discharge & consider remote mo	onitoring
 As above + blood tests improving, consider follow up with remote monitoring on discharge* Discharge may be considered in stable patients when Oxygen sats <93% if at baseline or expected Discharge can be considered in stable patients with mild exercise desaturation who have been full Any patient being considered for oxygen therapy on discharge must be discussed with the respiration 	d baseline sats are below this or NEWS 0 -4 but stable >48 hr ly investigated tory/home oxygen team
 3. Ward discharge checkst Patient contact details (ensure correct phone) Patient given advice to isolate at home until recovered i.e. at least 14 days from their positive SARS-CoV-2 PCR test Patient given: Copy of Discharge summary Follow up information Patient information leaflet Advice to contact NHS 111/999 if they deteriorate 	 4.*Consider virtual ward if: Clinical concern (including those with normal oxygen saturations) 65 years of age or older <65 years of age with moderate to severe comorbidity Lives alone Oxygen saturations not back to baseline 92-95% Oxygen sats <93%, (NEWS 0 - 4 & stable >48 hr) & Improving trajectory with respiratory input Immunosuppression Severe long term condition Overweight (BMI>30) BAME Learning disabilities incl. Downs, autism Diabetes

(patient must have telephone access and be able to communicate with support)

Figure 10: London Early Discharge and CVW criteria Jan 2021

Please note: Discharge < 10 days from symptom onset can be facilitated from ward-based care for people who are considered low risk, stable for 48 hours and saturations >95%.

7.2. Supported discharge using oxygen therapy

On the 16^{th of} January 2021, the NHS London Clinical Respiratory Network and London Clinical Advisory Group signed off clinical guidance to support safe and effective use of oxygen in the treatment of COVID 19. The **purpose of this document** is to ensure:

- Consistent criteria including oxygen saturation thresholds for ED referral to oximetry @home and COVID virtual ward
- 2. Consistent criteria for Ward discharge and referral to COVID virtual ward
- 3. Consistent pathways for discharge with home oxygen including oxygen weaning

4. Each ICS system able to consider the most appropriate model for them with best utilisation of space and workforce

Patients to be identified in	Supported discharge after admission (NOT for ED discharges or <i>de novo</i> patients in the community):							
team/HOSAR	Criteria: ≥ day 10 from onset of symptoms AND medically stable for at least 48hrs							
	Improving clinical trajectory (symptoms, function, oxygen saturation)	No fever for 48hrs consecutively without medication to reduce feve		ever	<i>Target sats 92-96%</i> If saturations are 92-96% on air, patients can be discharged withou oxygen		discharged without	
	NEWS2 <4 including a RR of 12-20 breaths per minute	CRP<50			Patients with oxygen saturations of 90-92% may on occasion be discharged without oxygen ONLY after respiratory senior decision maker review (e.g. patients with pre-existing chronic respiratory disease)			
	Completed Dexamethasone OR if discharged on O ₂ to complete up to 10 days	BM monitoring and DM management plan documented and in place		ce	COVID related complications stable/treated (eg VTE)	Rehabilitatior	n needs addressed	
Oxygen discharge criteria	Patients still requiring 1-2 LPM FiO ₂ with no ongoing hypercapnia may be considered for Option B or C as part of supported discharge pathway	All oxygen discharges to be overseen by respiratory/oxygen team following usual oxygen pathways, with risk assessment and consent		to m ent	Oxygen discharges only for <u>non-</u> <u>smoking</u> patients and non-smoking households	If required O ₂ documented a	weaning plan and in place	
Supported discharge pathway options	Option A. Virtual Ward (No home oxygen) as per national criteria			O fo tr	Dption B. Step-down bedded unit or O₂ weaning (as part of improving rajectory)	Option C. Us with commu team manag Ward	sual LTOT pathway inity respiratory jement +/- Virtual	
	Telephone support +/- oximetry; pati during normal hrs and information lea Virtual Ward pathway (A+C)		patient support line Pulse oximetry, vital signs and NE score monitoring with clinical revie and HOSAR/respiratory specialist support		Pulse oximetry, vital signs and NEWS2 core monitoring with clinical review nd HOSAR/respiratory specialist upport	Respiratory 0 review +/- Vir depending or capacity	Consultant led MDT rtual ward support n local pathways and	
	Access to secondary care advice and ambulatory acute care review as needed (A+B+C)							
Discharge from pathway as per NHS London ward discharge criteria	Aim for target saturations of ≥ 92% on air	Review by HOSAR within 4/52	6 w 6 w per	/eek secondary care remote review post discharge /eek Severe COVID clinic review as appropriate (as r BTS guidance)		12/52 CXR (as appropriate)		

5. Benefits to flow and capacity

For further information about home oxygen therapy in a variety of care settings please see section 8.2.

7.3. Discharge to step down facilities or care/nursing home following COVID illness

Follow current NHS/PHE guidance: https://www.gov.uk/government/collections/hospital-discharge-service-guidance

Stepdown of infection control precautions and discharging COVID-19 patients: <u>https://www.gov.uk/government/publications/designated-settings-for-people-discharged-to-a-</u> <u>care-home/discharge-into-care-homes-for-people-who-have-tested-positive-for-covid-19</u>

7.4. Management of Homeless Patients on discharge from Hospital Emergency Departments to GLA COVID

For advice on Management of Homeless Patients on discharge from Hospital Emergency Departments to GLA COVID please see letter published by the London COVID-10 Homeless in appendix 9.

Figure 11: COVID-19 supported discharge: Guidance on oxygen saturations and pathway for discharge with home oxygen

8. Treatment for Covid 19

8.1. Treatment Escalation Plan (TEP)

In any care setting, it is very important patients have a very clear Treatment Escalation Plan (TEP) that is informed by the outcome of conversations with patients and the clinical views of their clinicians. All monitoring and treatment options should always be considered in the context of any established Advance Care Plan (ACP). Not all patients will benefit from hospital transfer or admission, particularly those with life limiting co-morbidities and/or severe chronic illness and transfer for admission may even go against their previously recorded preferences. In London, some patients have provided consent to create a Co-ordinate My Care (CMC) record with their treating or palliative care teams where this is recorded, or it may be recorded on nursing / care home records. Scores such as the ISARIC 4C may help these discussions (https://www.mdcalc.com/4c-mortality-score-covid-19). More can be found on this initiative in section 8.4.

Clinicians are advised to discuss the risks, benefits and known evidence about most likely outcomes of the treatment options available across all care settings with patients with COVID 19, and their families and carers, so that they can express their preferences about their treatment and escalation plans. This includes advice on where hospital-based diagnostics are required to guide escalation in treatment.

The NICE COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community [NG163] - <u>here</u> – provides guidance on symptom management and end of life care in the community. More information can be found in sections 8.5 and 9 of this pack.

8.2. Antibiotic therapy in the treatment of COVID -19

Antibiotic therapy is not recommended for treatment or prevention of pneumonia if:

- COVID-19 is likely to be the cause and
- > symptoms are mild.

Inappropriate antibiotic use may reduce availability, and broad-spectrum antibiotics may lead to *Clostridium difficile* infection and antimicrobial resistance.

Offer an oral antibiotic for treatment of pneumonia in people who can or wish to be treated in the community if:

- the likely cause is bacterial or
- it is unclear whether the cause is bacterial or viral and symptoms are more concerning or
- they are at high risk of complications because, for example, they are older or frail, or have a pre-existing comorbidity such as immunosuppression or significant heart or lung disease (for example bronchiectasis or COPD) or have a history of severe illness following previous lung infection.

When starting antibiotic treatment, the first-choice oral antibiotic is:

doxycycline 200 mg on the first day, then 100 mg once a day for 5 days in total (not in pregnancy) OR

- amoxicillin 500 mg 3 times a day for 5 days.
- Do not routinely use dual antibiotics.

(https://www.nice.org.uk/guidance/ng165/chapter/4-Managing-suspected-or-confirmedpneumonia)

- Prednisolone should be used for exacerbation of asthma (not responding to escalation of inhaled therapies) but only for COPD if known concomitant asthma, history of raised eosinophils ≥ 0.3 or known steroid responsiveness.
- High dose bronchodilators (4-8 puffs salbutamol via large volume spacer) at home or nebuliser if patient already has one. The purchasing or loaning of nebulisers should be discouraged unless patients are already under the care of a Community Respiratory Team for underlying lung disease. (see page 8 for these cohorts)

8.3. Guidance in the use of oxygen therapy in COVID-19 outside of hospital settings

Before considering the use of oxygen therapy in out of hospital settings, healthcare professionals are asked to adhere to three key principles to ensure prescription and supply of oxygen is safe, effective and as evidence based as possible:

- The local respiratory clinical lead, palliative care clinical lead and/or local Home Oxygen Service - Assessment and Review (HOS-AR) are aware of and have ratified the oxygen treatment pathway proposed.
- 2. The pathway is supported by a clinical oxygen protocol specific to the setting of care and cohort of patients (e.g. intermediate care facility, mental health inpatient unit) which is consistent with principles of good medical oxygen practice namely:
 - administration of oxygen to treat hypoxia not breathlessness (see London Clinical Oxygen Network responsible oxygen prescribing messages www.networks.nhs.uk/nhs-networks/london-lungs)
 - setting and documentation of appropriate target oxygen saturations for each patient in line with guidance (<u>https://www.nice.org.uk/Media/Default/About/COVID-</u> <u>19/Specialty-guides/specialty-guide-oxygen-therapy.pdf</u>)
 - documented prescription of oxygen for each patient to include appropriate interface and range of flow rates to achieve target oxygen saturations
 - appropriate training of staff in administration, monitoring and weaning of oxygen and use and storage of oxygen equipment
- 3. There is a nominated clinical lead responsible for ensuring that this clinical oxygen pathway has appropriate local governance approval and ongoing review.

8.3.1. Oxygen supply route for out of hospital facilities.

Building upon existing arrangements for home oxygen services and new processes within Emergency Preparedness and Resilience Response (EPRR), the following protocol has been developed. This is to ensure that each local system (STP/ICS) has oversight of new oxygen

supply being requested to ensure oxygen use is appropriate and can be supported through the required governance and safety netting arrangements.



Figure 12: Access to site-specific oxygen supply through London EPRR

A checklist has now been created for each non-acute provider site to complete to ensure oxygen can be stored and used safely. Link to this check list can be found https://www.networks.nhs.uk/nhs-networks/london-lungs/?searchterm=london%20lungs

8.2.2 Specific patient cohorts who may require oxygen outside hospital settings

This section has been developed to support clinical decision making in the use of oxygen therapy for specific patient groups.

8.3.2.1 Patients with suspected or confirmed COVID-19 assessed within primary care COVID escalation hubs/assessment services.

This is defined as emergency oxygen and therefore falls under the remit of British Thoracic Society Emergency Oxygen guidance 2017. <u>https://brit-thoracic.org.uk/quality-improvement/guidelines/emergency-oxygen</u>

The clinical oxygen pathway for hot primary care sites is set out in appendix 1.

8.3.2.2 Patients with suspected or confirmed COVID-19 discharged from emergency departments and/or hospital wards who are for full active treatment (non-palliative)

Patients being discharged from the emergency department should have oxygen saturations in line with national guidance and be risk assessed, safety netted and referred on for remote monitoring according to national and regional criteria. Patients who are acutely hypoxic should be admitted to hospital and therefore provision of oxygen therapy outside the acute setting should not be considered in this group.

Admitted patients may be considered safe to discharge from hospital if their hypoxia has improved, they are achieving stable oxygen saturations \geq 92% on air as part of an improving general clinical picture, and do not desaturate significantly on exertion. In the majority of cases provision of oxygen therapy, including ambulatory oxygen outside the acute setting should not be required. In a small proportion of patients supported discharge on oxygen with an oxygen weaning plan may be appropriate; such patients must be reviewed by the Respiratory team and discharged from hospital with comprehensive support e.g. to a step-down facility OR under the supervision of a specialist or hospital@home team. They must have ongoing specialist (HOSAR) team follow up.

In patients who desaturate significantly on exertion should be investigated to identify and treat additional complications such as secondary infection or pulmonary embolism. Where this has been excluded, and patients continue to desaturate on exertion to an extent which impairs their ability to be discharged safely or to undergo rehabilitation, discharge with ambulatory oxygen may be considered after appropriate respiratory assessment in line with BTS guidance. Patients admitted to hospital with COVID-19 who also have COPD, another long-term respiratory condition or identified and treated complications such as pulmonary embolism or pulmonary fibrosis may be considered for hospital discharge with home oxygen, if clinically appropriate, in which case BTS Home Oxygen and NICE COPD guidance should be followed. An appropriately trained respiratory clinician and local HOSAR team must be involved where oxygen therapy is to be considered on discharge to ensure safe follow up and monitoring outside of hospital.

8.3.2.3 Patients with COVID-19 being discharged from hospital to a step down or rehabilitation facility

Patients should be clinically improving, medically fit for transfer, and have improved oxygen saturations to be eligible for safe step down from the acute setting. Patients who have an ongoing low flow (<2 LPM) oxygen requirement can be considered for supported discharge for oxygen weaning to step down beds if the correct infrastructure is in place. These patients must be assessed by the inpatient respiratory team and under the care of their local home oxygen service on discharge. Individual patients who fulfil criteria for long term home oxygen therapy as described above should be assessed and prescribed home oxygen in line with BTS Home Oxygen and NICE COPD guidance. An appropriately trained respiratory clinician and local HOSAR team must be involved in the care and follow up both these cohorts of patients.

When home is not immediately suitable for an individual, the Nightingale London will offer a step down/through facility from acute hospital predominantly for people registered with a London GP with complex needs who are medically optimised but whose discharge has been delayed. This will relate specifically to the following discharge to assess pathways:

Pathway 1: Receive ongoing reablement until the start date of the home care package commences in an out of hospital setting.

Pathway 2: Receive further assessment and management of needs with a view to going home in the long-term.

All trusts across London have been sent Nightingale referral guidance in a separate document.

8.3.2.4 Patients with suspected or confirmed COVID-19 whose preferred place for treatment is within their home, or nursing home

There is no recommended emergency oxygen pathway for supporting and monitoring patients with COVID-19 within their home, or within nursing/care home settings. Initiation of emergency oxygen therapy in this situation is not generally recommended. Care planning in these cases should be individualised and involve the patient, their family, their GP, and the local respiratory/HOSAR team, with expert support from palliative care/other specialists as appropriate, for example gerontology.

In the case of an individual patient who is acutely hypoxic due to COVID-19 (saturations <90% on air), who does not wish to be treated in hospital, a senior clinical decision maker, such as the GP or specialist palliative care physician, may consider a trial of supported emergency home oxygen therapy. Before ordering the oxygen, they must ensure the patient, their carers and their family understand the limitations of the home oxygen therapy, and that respiratory failure can only be treated to usual standard of care in acute hospital settings.

This oxygen supply can be arranged in one of two ways:

- i. **During working hours 9-5pm (Mon- Fri) -** this should be discussed with the local HOSAR team to support with arranging oxygen and ongoing support through usual pathways. It should be noted that these teams are not a hospital at home team and if patient requires daily review this would often need to be through alternate means. Oxygen advice would be given by the patient's local HOSAR service. The responsible prescriber/ clinician ordering the oxygen varies depending on local HOSAR service offer.
- ii. Outside working hours (or weekends/bank holidays) a responsible clinician (GP or palliative care clinician) is required to complete and submit a Part A Home Oxygen Order Form (HOOF A) on the Air Liquide online portal https://www.airliquidehomehealth.co.uk/hcp/HOOF. Before prescribing emergency oxygen and submitting the HOOF A, the responsible clinician must consider the likely prognosis, gain the patient's consent, and carry out a risk assessment to ensure that the patient and/or carers understand safety advice around the use of oxygen, including the dangers of smoking cigarettes and e-cigarettes near to oxygen equipment.

Box 3: advice for clinician's prescribing Home oxygen for patients with suspected or confirmed COVID-19

Any clinician prescribing home oxygen (including privately) for a patient must abide by the principles of Good Medical Practice as they apply to the prescribing and managing of medicines. They must therefore:

- be aware that they are clinically responsible for the prescription and administration of this medical gas
- ensure that the prescription is safe, and evidence based, supported by a clearly documented clinical indication, and the clinical rationale/reason for oxygen is recorded on the HOOF.
- ensure that the prescription sets out the correct dose (flow rate) and duration of treatment
- document appropriate risk assessment and mitigation (such as around smoking, falls etc)
- document that they have given appropriate information to the patient, their carers, and family
 about safe use of home oxygen, any potential adverse effects, likely duration of treatment, and
 arrangements for monitoring and follow upensure that information about the patient's home
 oxygen therapy is shared with other professionals as appropriate e.g. community healthcare
 professionals, the local HOSAR service and the fire and rescue services
- demonstrate that they have appropriate and up to date training in home oxygen therapy and use
- If there is concern that safety advice will not be followed, oxygen should not be ordered.
- The responsible clinician must document consent and risk assessment on the Home Oxygen Consent Form (HOCF) and Initial Home Oxygen Risk Mitigation Form (IHORM) on the portal <u>https://www.airliquidehomehealth.co.uk/hcp/Content/HORM.pdf</u>.
- A copy of the signed form should be stored in the patient's record
- The patient's local HOSAR service must be notified of the decision to prescribe home oxygen as soon as possible within working hours so that they can support safe follow up. Patients in this situation will require close on-going clinical review and supportive care by a senior clinician.

All clinicians are required to be familiar with **GMC guidance on prescribing and managing medicines and devices**, and need to be aware that serious or persistent failure to follow this will put their registration at risk.

https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/prescribing-andmanaging-medicines-and-devices/about-this-guidance

8.3.2.5 Patients with suspected or confirmed COVID-19 at the end of life

For patients with COVID-19 who are in the last days or hours of life, oxygen therapy is unlikely to be more effective than opioids and sedatives for the symptomatic management of breathlessness and associated distress. Oxygen therapy is likely to be burdensome in this situation, a barrier between family members and the patient, and a cause of additional anxiety related to equipment and deliveries. Measuring oxygen saturations in this setting is unlikely to be helpful. The focus of care should be on palliation using evidence-based pharmacological and non-pharmacological interventions, and individualised support to the person and those important to them. Please see section 8.5 for advice on Coordinate My Care and advanced care planning, and Section 9 for specialist palliative care.

8.4. Use of Dexamethasone in community settings

Use of Dexamethasone is generally not recommended in community care settings. NICE have published <u>guidance on the use of dexamethasone</u>¹⁰ following the findings from the Recovery trial on the 3rd September. There was a statistically significant reduction in all-cause mortality at 28 days in the hospital setting using 6mg Dexamethasone for up to 10 days. Dexamethasone was used in the hospital setting for patients who were diagnosed with **severe** or **critical** COVID-19 with the <u>WHO criteria</u>¹¹ They were also supported with the use of supplementary oxygen with or without invasive mechanical ventilation and with higher concentration of oxygen. There was no evidence that dexamethasone provided any benefit among patients who were not receiving respiratory support at randomization, and the results were consistent with possible harm in this subgroup. The Chief Pharmaceutical Officer and National Medical Director have also published a recent <u>letter</u>¹² (13th November 2020) on the use of corticosteroids including dexamethasone and hydrocortisone.

The identification of patients suitable for discharge from hospital while still taking glucocorticoids, should be undertaken by a senior clinical decision maker experienced in the management of COVID-19.

Such patients should:

- Be clinically stable with an improving disease trajectory.
- Appropriately selected with attention to the presence of other risk factors or co-morbidities

In these circumstances, oral glucocorticoids should follow a weaning plan with a clear stop or review date, following discharge, with monitoring being undertaken with specialist supervision.

Specialist supervision will need to address the monitoring of COVID symptoms, as well as provide MDT input into the follow-up of the metabolic impact of glucocorticoid use on blood glucose. This is usually with input from a respiratory and endocrine team.

It is not generally recommended to commence Dexamethasone in people with non-critical illness in the community setting. Use in mild disease may be linked with increased risk of mortality. The NICE guidance above recommends using Dexamethasone only in those with severe or critical disease.

8.5. Advice on the use of anti-coagulation in treating COVID- 19 in community settings

Commencing anticoagulation is generally not recommended in the absence of confirmed PE. This consensus statement recommends the consideration of the Royal College of Physicians guide: *Clinical guide for the prevention, detection and management of thromboembolic disease in patients with COVID-19*²¹ for the use of prophylactic anticoagulant administration for COVID-19 positive symptomatic patients in the community.

In London, wider conversations on developing clinical consensus on appropriate use of anticoagulation are underway.

8.6. Co-ordinate my Care (CMC)

Prior to onboarding people onto the variety of monitoring and treatment pathways available for the optimal management of people with COVID 19, it is essential to look to see if a CMC record has been created for the person. It may contain essential information which can aid decision making by emergency services. Residents of nursing / care homes may have similar information recorded on other documentation available in the home.

Such records may contain:

- Information about their medical history
- Contact information of their next of kin or those with Lasting Powers of Attorney
- Professionals who are involved in their care
- Records of their wishes and preferences regarding place of care
- Established Treatment Escalation Plans and cardiopulmonary resuscitation decisions
- Record of any Advance Decisions to Refuse Treatment (ADRT)
- Symptom control guidance

Resource information to assist clinicians to create and update CMC records is referenced in Appendix 6. Training resources are available at the link below. These includes a five-minute video overview.

https://www.coordinatemycare.co.uk/for-healthcare-professionals/

There is however also an acknowledgement that some decisions are going to be complex and clinicians may find the guidance released from the BMA and the RCP helpful:

https://www.rcplondon.ac.uk/news/ethical-guidance-published-frontline-staff-dealing-pandemic

https://elearning.rcgp.org.uk/mod/page/view.php?id=10537

8.6.1. Discussing Treatment Escalation / Advance Care Planning and preferred place of care – supporting patients and their families

If there are no existing or recorded advance care plans, opening discussions to ascertain any preferences or wishes is encouraged if sensitively approached to avoid inappropriate escalation of treatment/transfer of care to hospital. This should be done by a competent and experienced health care professional – seek support from colleagues via the Palliative Care MDT / local Specialist Palliative Care team if needed. These should be documented and shared urgently via CMC so they can be accessed by those in urgent and emergency care.

The following joint statement on Advance Care Planning has be provided by the BMA, CPC, CQC and RCGP (1.4.2020).

Joint statement on advance care planning

The importance of having a personalised care plan in place, especially for older people, people who are frail or have other serious conditions has never been more important than it is now during the Covid 19 Pandemic.

Where a person has capacity, as defined by the Mental Capacity Act, this advance care plan should always be discussed with them directly. Where a person lacks the capacity to engage with this process, then it is reasonable to produce such a plan following best interest guideline with the involvement of family members or other appropriate individuals.

Such advance care plans may result in the consideration and completion of a Do Not Attempt Resuscitation (DNAR) or ReSPECT form. It remains essential that these decisions are made on an individual basis. The General Practitioner continues to have a central role in the consideration, completion and signing of DNAR forms for people in community settings.

It is unacceptable for advance care plans, with or without DNAR form completion to be applied to groups of people of any description. These decisions must continue to be made on an individual basis according to need.

This is a joint statement from the following organisations:

British Medical Association (BMA) Care Provider Alliance (CPA) Care Quality Commission (CQC) Royal College of General Practice (RCGP)

In addition, see the following statement on Advance Care Planning from Ruth May's letter (7.4.2020).

'The key principle is that each person is an individual whose needs and preferences must be taken account of individually. By contrast blanket policies are inappropriate whether due to medical condition, disability, or age. This is particularly important in regard to 'do not attempt cardiopulmonary resuscitation' (DNACPR) orders, which should only ever be made on an individual basis and in consultation with the individual or their family'.

8.7. Bereavement care

It is important that those important to someone who dies during the COVID-19 pandemic receives information and support in their grief. They should be directed to their General Practitioner who will be able to refer to local services. Below are some links to regional / national resources:

http://www.londonscn.nhs.uk/wp-content/uploads/2019/06/Bereavement-Leaflet.pdf

https://www.london.gov.uk/coronavirus/how-cope-bereavement-and-grief-during-coronavirusoutbreak

https://www.nhs.uk/conditions/coronavirus-covid-19/social-distancing/bereavement-advice-andsupport/

https://www.nhs.uk/conditions/stress-anxiety-depression/coping-with-bereavement/

9. Specialist Palliative Care and symptom control

Some patients may already be known to local Specialist Palliative Care services and support for ongoing management, will be available including access to telephone advice. Referrals for specialist palliative care support for new patients should continue. The continuation of regular palliative care multidisciplinary team (MDT) meetings within GP practices is encouraged to support decision making and provide specialist advice.

9.1. Care in the home (including nursing and care home settings)

For patients who have severe symptoms and / or are deteriorating, consider referral to primary care and local specialist palliative care services, with appropriate consent. This will include patients with a high symptom burden, those with an established wish to be cared for at home at end of life, and those who have capacity with life limiting illness and decide to remain at home in the current situation. It may also include patients that are considered to be actively dying and do not have capacity, and for whom transfer to hospital is considered not be in their best interest by the professionals involved. For further detail specific to this care setting please see <u>Care Home</u> <u>Resource Pack</u>.

9.2. Non-pharmacological control of symptoms

Breathlessness, anxiety, delirium, cough, and fever have all been reported as a result of COVID-19. A number of non-pharmacological treatments exist which can be used in any patient reporting distress from these symptoms, but which may be particularly important in palliation.

9.2.1. Breathlessness (see NICE COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community [NG163] updated 13.10.2020)

Be aware that severe breathlessness often causes anxiety, which can then increase breathlessness further.

As part of supportive care the following may help to manage breathlessness:

- keep the room cool
- relaxation and breathing techniques and changing body positioning
- encourage patients who are self-isolating alone, to improve air circulation by opening a window or door (do not use a fan because this can spread infection)

Local services may have created their own breathlessness guidance for non-pharmacological management at home, otherwise the NIHR Applied Research Collaborative Palliative and End of Life Theme have created the attached leaflet Pharmacological control of symptoms

Use local symptom control guidelines and advice from local Specialist Palliative Care teams to guide the use of medication to control symptoms. Recommendations may change over time due to availability of medications and equipment.

Please note that patients with severe symptoms of COVID-19 may rapidly deteriorate and anticipatory prescribing is therefore advised for those in the last hours to days of life or where there may be an anticipated deterioration for those to be cared for at home.

The RCGP have a variety of resources including clinical guidelines for the community setting – see <u>here</u>.

Consider the following symptoms and prescribe appropriate medications (adapted from Association for Palliative Medicine COVID-19 <u>guidelines</u> (16.1.21), and the NICE COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community guidance (updated 13.10.20) <u>NG163</u>.

Please see the guidance the London End of Life Care Clinical Network for further information on non-oral or -non-parental routes for administration – <u>here</u>.

Symptom	Clinical scenario	Recommendation
Breathlessness (at rest or minimal exertion)	Opioid naïve (i.e. no previous opioids) and able to swallow	Morphine sulfate immediate release 2.5mg to 5mg PO 2 to 4hrly as required Morphine sulfate modified release 5mg bd, increased as necessary (titrate up to maximum 30mg daily)
	Patients who are on regular opioids for pain relief	Morphine sulfate immediate release 5mg to10mg PO 2 to 4hrly as required, or one twelfth of the 24hr dose for pain, whichever is greater
See NICE for special considerations including renal impairment.	Patients who are unable to swallow	Morphine sulfate 1mg to 2mg subcutaneously 2 to 4hrly as required. If on regular opioids for pain or if needed regularly (more than twice a day), consider a continuous subcutaneous infusion via syringe pump (if available) starting with Morphine Sulphate 10mg over 24 hours.
Anxiety	Patients who are able to swallow	Lorazepam 0.5mg to 1mg 4 times a day as required (maximum 4mg in 24 hrs) Reduce the dose to 0.25mg to 0.5mg in elderly or debilitated patients (maximum 2mg in 24 hours) Oral tablets can be used sublingually (off-label use)

Anxiety	Patients who are unable to swallow	Midazolam 2.5mg to 5mg subcutaneously every 2 to 4 hours as required
		If needed frequently (more than twice daily), a subcutaneous infusion via a syringe driver may be considered (if available) starting with midazolam 10 mg over 24 hours Reduce dose to 5 mg over 24 hours if estimated glomerular filtration rate is less than 30 ml per minute
Delirium	Patients who are able to swallow	Haloperidol tablets 0.5mg to 1mg at night and every 2 hours when required.
		Start at higher dose of 1.5mg to 3mg if the patient is severely distressed or risk identified.
		Can be increased by 0.5 mg to 1mg increments as required (maximum 10mg daily or 5mg in elderly)
		Can be given at the same does subcutaneously or by 24-hour infusion such as 2.5mg to 10mg over 24 hours.
		Consider adding a benzodiazepine such as lorazepam or midazolam if the patient remains agitated.
	Patients who are unable to swallow	Levomepromazine 12.5mg to 25mg subcutaneously as a starting dose and then hourly as required (use 6.25mg to 12.5mg in the elderly).
		Maintain with subcutaneous infusion of 50mg to 200mg over 24 hours according to response (please note doses of over 100mg over 24 hours should be given under specialist supervision)
		Consider use of Midazolam alone or in combination with levomepromazine if the patient also has anxiety (see dosages above).
Cough	Patients who are able to swallow	Initial management: use simple non-drug measures, for example A teaspoon of honey First choice, only if cough is distressing: codeine linctus (15 mg/5 ml) or codeine phosphate tablets (15 mg, 30 mg) up to 4 doses in 24 hours
		If necessary, increase dose to a maximum of 30-60mg 4 times a day (maximum 240mg in 24 hours)
		Second choice, only if cough is distressing: morphine sulfate oral solution (10 mg/5 ml) 2.5 mg to 5 mg when required every 4 hours Increase up to 5 mg to 10 mg every 4 hours as required If the patient is already taking regular morphine increase the regular dose by a third
Fever	N/A	Paracetamol 500mg to 1g PO maximum 4g per day
		Ibuprofen 400 mg three times a day when required NICE has updated its guidance to include ibuprofen as an option for managing fever and other symptoms that antipyretics would help treat, in line with its evidence summary on acute use of NSAIDs for people with or at risk of COVID-19 and NHS England policy.

N.B. Sedation and opioid use should not be withheld because of an inappropriate fear of causing respiratory depression.

Treatment	Dosage
Opioid	Morphine sulfate 10 mg over 24 hours via a syringe driver, increasing stepwise to morphine sulphate 30 mg over 24 hours as required
Benzodiazepine if required in addition to the opioid	Midazolam 10 mg over 24 hours via the syringe driver, increasing stepwise to midazolam 60 mg over 24 hours as required
Add parenteral morphine or midazolam if required	Morphine sulfate 2.5 mg to 5 mg subcutaneously as required Midazolam 2.5 mg subcutaneously as required

For patients in their last days and hours of life for managing breathlessness:

Dosage

Higher doses may be needed for symptom relief in patients with COVID-19. Lower doses may be needed because of the patient's size or frailty. Seek specialist advice as needed.

CCGs and their respective STP/ICS areas have been asked to establish local hubs (if not already in place) to ensure rapid access to anticipatory medicines in primary care or community settings. These hubs should provide access to the above anticipatory medication and a selection (agreed locally) of other non-oral or non-parental medication.

All primary care bulletins can also be found here: <u>https://www.england.nhs.uk/coronavirus/primary-care/other-resources/primary-care-bulletin/</u>

For the reuse of medicines, please refer to this <u>publication</u>. It is suggested that local SOPs are developed.

10. Verification of Death and Care after Death

National guidance has now been published and should be followed. <u>https://www.gov.uk/government/publications/coronavirus-covid-19-verification-of-death-in-times-of-emergency/coronavirus-covid-19-verifying-death-in-times-of-emergency</u>

https://www.gov.uk/government/publications/covid-19-guidance-for-care-of-thedeceased/guidance-for-care-of-the-deceased-with-suspected-or-confirmed-coronavirus-covid-19

There is also specific guidance on this process within the Care Home Resource Pack accessed at https://www.healthylondon.org/resource/accelerated-improvement-resources/enhanced-health-in-care-homes/further-information/

11. Post-Covid follow-up – emerging guidance for the multidisciplinary management of those who have had suspected or confirmed COVID-19 infection

11.1. Routine follow up pathways

It is recognised that many people will have received their initial COVID-19 assessments and treatment in primary care settings and may continue to have symptoms for several weeks following their acute illness. These patients may require follow up to determine their needs. It is recommended that all patients are contacted/reviewed 6 weeks after initial COVID19 symptoms CXR may be indicated at 12 weeks in those that are still symptomatic & some will require further diagnostics and potential secondary care post covid assessment clinic review/advice.

11.1.1. Identifying patients that require follow up for COVID-19 in primary care

As advised in section 2.2.5, practices and services should maintain a list of known/ suspected COVID-19 patients who are being managed at home. It is recognised that every local health and care system has managed COVID demand and patient management differently due to resources and pathways available at the time, especially at the early stages of the pandemic. As such, it is also recognised that a potential consequence of this is that practices may not have a full understanding of the number of patients requiring follow up.

At this stage, there is not one approach through which to identify and contact those patients who:

- may now require ongoing surveillance to identify ongoing symptoms 6 weeks post COVID-19 diagnosis and/or
- may require follow up to promote full recovery

There are a number of local examples of ways patients who can be identified through READ/SNOMED codes that have been recorded during initial consultation for suspected COVID-19 either from their usual GP clinic OR within the designated Hot Hub sites.

A list of new SNOMED codes has recently been published and can be accessed through the link below. Time frame for searches varies according to local experience (approximate time frame for London is Feb – July 2020). It is important to cover the time-period of rising case numbers prior to the full functioning of the hot hubs

https://www.snomed.org/news-and-events/articles/march-2020-interim-snomedct-release-COVID-19

Useful SNOWMED searches include:

- READ/SNOMED for suspected or confirmed COVID
- READ/SNOMED for suspected or confirmed COVID AND called 111
- READ/SNOMED for suspected or confirmed COVID AND oxygen saturation level under 95%

Some practices may opt to use text services to prompt those patients identified to contact the GP if they are still experiencing ongoing symptoms. Telephone assessments can be used to

triage patients into cohorts for those who need active follow up or remote monitoring; those who need referral to post-COVID clinics, and those who just require safety netting.

If there is no mobile number on the patient record or the text message does not deliver, then practices should make telephone contact to ensure health inequalities are not widened. Practices may decide that initial contact can be made by an administrator/receptionist with an appropriate script.

11.1.2. Guidance for the clinical review of patients discharged from ED or primary care hot sites post suspected or confirmed COVID-19 pneumonia diagnosis

The British Thoracic society have produced guidance for the Respiratory follow up of patients with a clinic-radiological diagnosis of pneumonia.

https://brit-thoracic.org.uk/about-us/covid-19-information-for-the-respiratory-community/

Specific clinical aims for following up patients who have been identified and managed within primary and community care settings include:

- To identify patients who have early, medium, and long-term respiratory complications of COVID-19 pneumonia cases and ensure they are then followed up by appropriate services.
- The most serious and potentially life limiting complications of COVID-19 such as pulmonary fibrosis and pulmonary vascular disease are identified and referred onto respiratory services as soon as possible
- Patients diagnosed with COVID-19 pneumonia who have made a full recovery are appropriately reassured that their CXR changes have resolved
- Respiratory, radiology and physiology resources are coordinated and used optimally and efficiently using virtual systems where feasible given the additional workload expected to deliver high quality post COVID-19 respiratory follow up, either within acute settings or respiratory diagnostic hubs/integrated virtual clinics
- Patients with hitherto undiagnosed pre-existing respiratory disease or alternative diagnosis are opportunistically identified and managed as appropriate (e.g. asthma, COPD, TB)
- If a rehabilitation referral is not possible patients are proactively reassessed for this need later in the pathway

This pathway has been developed as a guide for Primary and Community Care teams providing follow up to patients who have either been identified as COVID or suspected COVID in Primary and Community Care settings or Emergency Departments and need to be followed up 6 weeks or more after the initial diagnosis.

Routine Primary care follow up pathway COVID 19

6 weeks post initial diagnosis of COVID in ED or Primary Care setting

Offer patient telephone / video consultation. Please see Appendix 9 for example questionnaire. Record assessment outcome on COVID electronic template

Check for symptoms resolution - notably exertional breathlessness.

CXR done or requested initially. If abnormal, arrange a repeat CXR at least 6 weeks after initial X-ray if symptomatic, or 12 weeks if symptoms have resolved as per BTS guidance.

If any ongoing concerns with persistent breathlessness or chest pains, despite normal CXR, consider desaturation test, request blood tests (CRP, FBC, BNP) and manage appropriately

+/- urgent respiratory *I* ambulatory care pathways and further diagnostics (+/- CT etc) **OR** post covid clinic review via referral form (Appendix 9)

Figure 13: London COVID follow up pathway

11.1.3. Guidance on the holistic assessment in Primary Care

In December 2020, NHS London published the *'Clinical Reference Guide: Post COVID syndrome* pathway'. This document outlines key guidance to inform the clinical assessment and subsequent onward referral for those people with suspected post-COVID syndrome. The slide below outlines the key elements of primary care assessments to ensure timely and appropriate



Figure 14: Primary Care Covid follow up assessment criteria, NHS London Clinical Reference Guide: Post-Covid Syndrome pathway

onward referral.

11.1.4. Emerging insights on the management of specific symptoms following suspected or confirmed COVID 19 Pneumonitis

The information contained within the tables below has been collated to aid clinical decision making throughout the follow up of COVID 19 pneumonitis. Clinical judgement is key to any decision making and if there are any doubts, specialist advice should be sought from GP support lines or whatever is available locally.

Symptom	Factors to consider in the history	Initial investigations to consider	Clinical decision-making
Breathless- ness	Nature of breathlessness:• At rest• ExertionalAssociated symptoms:• Cough• Wheeze• Chest pain	 Oxygen saturation at rest and post- exertion Chest x-ray (if no improvemen t) 	Please be aware that there is an increased likelihood of VTE including pulmonary embolism associated with severe COVID-19 pneumonia Patients tend to present with fairly typical features (i.e. sudden worsening of breathlessness, pleuritic chest pains that are non-flitting, tachycardia, and worsening hypoxia)
	Risk factors:	.,	seek immediate advice from Respiratory or GP support lines or consider acute assessment

	 PE: personal or family history of venous thromboembolism, malignancy, recent prolonged immobility, prothrombotic haematological conditions Cardiac disease: personal history of cardiovascular disease <u>Recent investigation</u> <u>results:</u> Chest x-rays, CT scans and blood tests from recent hospital attendance 	 Blood tests (if available) including FBC CRP and BNP if available) In absence of lung function, and if asthma or COPD expected, a peak flow can be obtained (done in open space or remotely observing patient in a separate room) 	 Various causes of tachypnoea; infection, venous thromboembolism (see "pleuritic chest pain"), anxiety Monitor home pulse oximetry to help guide management Request up-to-date chest x-ray if no improvement Advise patient not to over-exert themselves (pacing advice) if symptoms are mainly exertional Other considerations: If recent investigations and observations are normal and there is no clear cause for their symptoms, explore potential fatigue, autonomic dysregulation. disordered breathing and/or underlying mood disturbances If breathlessness continues post 4-6 weeks consider referral into local respiratory services or post covid clinics (community or secondary care) for consideration of further investigations such as spirometry or full lung function tests /Ct thorax to ensure no parenchymal or VTE sequelae of COVID-19 The British Lung Foundation has produced helpful advice for patients on COVID recovery.
Cough	 Nature of cough: Productive of purulent sputum Dry Red flags: Weight loss Night sweats Haemoptysis 	 Chest x-ray (if no improvemen t) Sputum MCS 	Productive cough: i. Could represent secondary bacterial infection if productive of yellow/green sputum ii. Treat with antibiotics according to current guidelines iii. Consider sending sputum MCS if no improvement or if known to have underlying chronic respiratory disease (e.g. bronchiectasis) Dry cough: i. ii. Likely to be post-viral in origin as the airways remain hyper-sensitive (may last for several weeks) ii. Consider other causes (e.g. medications, asthma, GORD, postnasal drip) iii. Consider measuring peak flow Persistence of symptoms: If no improvement after 6 weeks, request an up-to-date chest x-ray to exclude other underlying pathology If any red flags: Consider need for requesting cross-sectional imaging and referring on 2WW pathway

Symptom	Factors to consider in the history	Initial investigations	Clinical decision-making		
Pleuritic					
Pleuritic chest pain	Associated • Cough • Calf pain Symptoms: • Dyspnoea • Palpitations • Haemoptysis Risk factors: • PE: personal or family history of venous thromboembolism, malignancy, recent prolonged immobility, prothrombotic haematological conditions • Cardiac disease: personal history of cardiovascular disease Recent investigation results: Chest x-rays, CT scans and blood tests from	 Oxygen saturations at rest and post- exertion Blood tests (if available) including inflammatory markers (white cell count and CRP) Chest x-ray (up to date) ECG 	 If hypoxic at rest or desaturating post-exertion seek immediate advice from Respiratory and/or or ambulatory care services to consider acute assessment) Flitting chest pains 6-8 weeks post COVID are not unusual and do not signify PE in absence of other typical clinical features. If oxygen saturation normal: PLUS normal chest x-ray: Consider non-respiratory causes (e.g. infection or inflammation elsewhere). PLUS chest x-ray abnormal/showing consolidation: Symptoms may be explained by pneumonia; needs antibiotics ECG abnormalities: Check ECG to exclude ischaemic changes 		
	recent hospital				
Palpitations					
/ tachycardia	Associated symptoms / red flags:	ECG Blood tests	i. Tachycardia may be driven by infection but need to consider possibility of arrhythmia		
	 Myocardial ischaemia (chest pain) Syncope/postural dizziness Heart failure (acute breathlessness) Shock (hypotension) 	 Encluding (including thyroid function) Erect and supine BP 	 ii. If symptoms persist with no clear cause or if associated with red flags, refer for urgent ECG & medical/cardiology assessment to exclude underlying arrhythmia. iii. Consider orthostatic measures of BP, HR and a Holter monitor to exclude autonomic dysregulation. 		
	Known cardiac conduction abnormalities				

Thyroid disease		

Symptom	Factors to consider in the history	Initial investigations to consider	Clinical decision-making
Fever			
	 Screen for infective symptoms / signs: Respiratory Urinary Gastroenterologic al Dermatological Neurological Rheumatological Cardiac 	 Bloods tests for inflammato ry markers Cultures (sputum, urine, wound swab) Chest X- ray 	 Ongoing fevers may possibly be secondary to persisting COVID-19 illness but important to consider other potential causes Request blood tests for inflammatory markers and microbiological tests where relevant Antibiotics indicated if: cough with purulent sputum production (i.e. secondary bacterial pneumonia rather than for dry cough alone); or for other suspected infections as directed by the history and test results
Hoarseness Anxiety and Depression	Associated symptoms / red flags: Breathlessness Swallowing difficulties Is being seen in both patients with severe and moderate COVID disease	Cross-sectional imaging of neck +/- thorax • Screen with PHQ/GAD	 i. Exclude oropharyngeal candidiasis (especially if immunosuppressed or on inhaled corticosteroids) ii. If hoarseness is thought to be due to inhaled corticosteroids, advise use of a spacer and mouth rinsing (where relevant). If no clear cause, liaise with ENT (may need to consider nasendoscopy or cross-sectional imaging if symptoms persist or other red flags) I. Reassure – likely to improve with time II. Refer to IAPT if service available III. Be aware of PTSD in ITU survivors – may need psychologist support IV. Refer to psychology services unless other physical health issues are present
Fatigue	<u>Common feature post</u> <u>COVID</u>	Reassure	 Usually resolves with time, however can be very persistent post COVID and follow a fluctuating course. Emphasise the importance of pacing and consider referral to community fatigue or post covid clinics if severe. Rest and convalescence. Please see useful online resource for people recovering from COVID 19 with residual fatigue https://Covidpatientsupport.lthtr.nhs.uk

11.2. Post - Covid Syndrome; definition and best practice treatment pathway

11.2.1. Post Covid Syndrome definition

Emerging evidence and patient testimony are showing a growing number of people who contract COVID-19 cannot shake off the effects of the virus months after initially falling ill. Symptoms are wide-ranging and fluctuating, and can include breathlessness, chronic fatigue, "brain fog", anxiety and stress. For further information please visit https://www.england.nhs.uk/coronavirus/post-covid-syndrome-long-covid/

The <u>NICE guideline</u> published on 30 October 2020 defines post-COVID syndrome as signs and symptoms that develop during or following an infection consistent with COVID-19 which continue for more than 12 weeks and are not explained by an alternative diagnosis. The definition says the condition usually presents with clusters of symptoms, often overlapping, which may change over time and can affect any system within the body. It also notes that many people with post-COVID syndrome can also experience generalised pain, fatigue, persisting high temperature and psychiatric problems.

11.2.2. Your Covid Recovery

<u>Your Covid Recovery</u> is an online resource that is useful for patients to help them understand the variety of longer-term symptoms they may experience as they recover from COVD 19. This resource must be accessed by the clinician overseeing their COVID recovery, who can then provide access to the online resources available.

11.2.3. Post Covid Assessment and MDT clinics.

NHSE have published <u>guidance for Post COVID Assessment clinics</u> to meet the varied need of this population. This includes both patients who were managed at home (with positive SARS-Cov-2 serology or a clinical diagnosis) during the acute phase as well as those who were admitted to hospital. This guidance states that as a minimum the post-COVID assessment clinic should:

- Be available following clinician referral, to all affected patients, whether hospitalised or not
- Have access to a multidisciplinary team of professionals to account for the multi-system
 nature of post-COVID syndrome
- Support collaboration across localities where patients' needs require this
- Have age-appropriate arrangements in place for managing children & young people with post-COVID syndrome including support for psychological needs
- Have access to diagnostic tests
- Ensure coverage of the population in that geography
- Have a plan for ensuring equity of access (bearing in mind many population groups have been disproportionately affected by COVID-19
- Have a local communications plan for raising awareness within the clinical community
- Have an external communication plan for informing and raising awareness with patients.

In London, each ICS has established at least 1 clinic.

Referral should be after face-to-face review of patient. NHS London has developed a referral form (see Appendix 10) that captures information on:

- 1. Date of symptoms
- 2. Swab or antibody positive
- 3. Hospital attendance or admission and level of care
- 4. Examination findings including sats on air and any desaturation on exertional testing (sit to stand or 40 step)
- 5. Main symptoms and concerns that require addressing and how they feel the patient would benefit from specialist assessment clinic
- 6. Investigations including CXR, FBC, U&E, LFT, CRP, BNP, Ferritin, Vid D level, ECG -where possible,
- 7. Consider COVID-19 screening questionnaire https://www.acnr.co.uk/2020/06/c19-yrs/

12. Business as Usual for Non-COVID-19 Respiratory Patients

There are several tasks which should be performed to reduce the risk from COVID-19 in this group. They are:

- Identify the respiratory patient cohort at risk
- Provide them with the local respiratory advice line number
- Reinforce government guidance on social distancing, hand washing and use of face masks, and adherence to Government Tiers Levels.
- If they have no support at home, ensure they have registered on the government's extremely vulnerable list or register for them

https://www.gov.uk/coronavirus-extremely-vulnerable

- Ensure they have sufficient medications and that they can be delivered to their homes as required
- For COPD patients, unless contraindicated, prescribe a rescue pack, and ensure it is delivered to them at home. Ensure this is not on a repeat prescription and ensure that the patient knows how & when to use this.
- Advise them to get a home thermometer and pulse oximeter if possible (or issue them if you have access to stock)
- Use prednisolone for AECOPD for severe wheeze/concomitant asthma or eosinophilia on FBC previously >=0.3. Use antibiotics as per current guidance.
- Ensure they have an advance care plan and offer to record this on CMC. If one is not in place, offer to explore their wishes.
- Currently most Pulmonary Rehabilitation Services are suspended or running via digital platforms, services maybe supporting patients to exercise at home or virtually. Please refer patients as usual to your local PR service for support and mention if has digital access. Patients can also be directed to <u>https://www.blf.org.uk/support-for-you/coronavirus</u> for information on how to remain active.
- Tell patients established on Inhaled Corticosteroids (ICS)to continue to use them and delay any planned trials of withdrawal of ICS.

12.1 Diagnosing Asthma and COPD during COVID-19 pandemic whilst lung function testing is not available

At the time of writing, there is ongoing debate whether spirometry is an aerosol generating procedure (AGP). PHE do not consider spirometry to be an Aerosol Generating Procedures (AGP) but the ARTP consider that forced manoeuvres that may make patients cough during the procedure are potential AGPs and should not be performed routinely, and not without the full PPE protection. This will make the routine diagnosis of asthma and COPD more challenging in primary and community care. Even if spirometry is restricted to PCN based diagnostic hubs with full PPE, the volume of work will be very restricted, as is the provision of lung function testing in secondary care. Thus this document offers a pragmatic guide to diagnosing asthma and COPD in primary and community care settings without spirometry.

12.1.1 Asthma

BTS/SIGN guideline for the management of asthma 2019 gives good guidance on how to assess and diagnose asthma based on probability and response to empirical treatment with inhaled steroids. Even if spirometry were available, this is rarely diagnostic of asthma unless the patient is symptomatic at the time of testing and exhibits good reversibility. Diagnosis should be based on good clinical history supported by objective measurements of variability.

From BTS/SIGN:

Undertake a structured clinical assessment to assess the initial probability of asthma. This should be based on:

- a history of recurrent episodes (attacks) of symptoms, ideally corroborated by variable peak flow when symptomatic and asymptomatic
- symptoms of wheeze, cough, breathlessness, and chest tightness that vary over time
- recorded observation of wheeze heard by a healthcare professional
- personal/family history of other atopic conditions (in particular, atopic eczema/dermatitis, allergic rhinitis)
- no symptoms/signs to suggest alternative diagnoses.

In patients with a *high* probability of asthma:

- record the patient as likely to have asthma and commence a carefully monitored initiation of treatment (typically six weeks of inhaled corticosteroids)
- assess the patient's status with a validated symptom questionnaire, ideally corroborated by domiciliary serial peak flows to capture times with/without symptoms
- with a good symptomatic and objective response to treatment, confirm the diagnosis of asthma and record the basis on which the diagnosis was made
- if the response is poor or equivocal, check inhaler technique and adherence, arrange further tests, and consider alternative diagnoses.

In patients with an *intermediate probability* of asthma based on clinical assessment:

• patients who have some features of asthma but do not have peak flow variability and are not responding to treatment usually need further assessment including spirometry

with reversibility in a diagnostic hub if available. However, more prolonged domestic peak flow monitoring may be helpful.

• If any doubt, refer for whatever specialist advice is available locally.

12.1.2 COPD

The diagnosis of chronic obstructive pulmonary disease (COPD) relies heavily on history but can only be formally diagnosed if fixed airflow obstruction without reversibility is demonstrated, unless diagnosed as emphysema on a computerised tomographic (CT) scan. However, in the absence of spirometry, obstruction can also be suspected using peak flow measurement:

- PEFR <75% predicted suggests a degree of airflow obstruction.
- When trying to assess whether this is COPD, a serial measurement over 2 weeks that does not vary but also remains low despite use of salbutamol for symptom relief would suggest fixed airflow obstruction and is suspicious for COPD in the context of supporting clinical history.
- Patients who do not have variation in peak flow should have an empirical trial of dual bronchodilator therapy (or ICS/LABA if history of exacerbations and eosinophils>0.3).
- In current smokers, offer treatment for tobacco dependency.
- Any tentative diagnosis of COPD should be confirmed with spirometry when readily available and a clear record should be made in the patients notes that spirometric confirmation of obstruction without reversibility is required at a later date.
- If any doubt, refer for whatever specialist advice is available locally.

For patients in whom COPD is suspected and a PEF test is considered necessary this can be carried out using the patient's own PEF meter and disposable mouthpiece in a room with an open window or outside the building.

It is also as important in people suspected to have COPD to rule it out because of other causes with common symptoms who require very different treatments. If a necessary investigation such as spirometry has been deferred this should be clearly flagged in the patient record and the patient informed that this test will be carried out at a later date.

12.1.3 Peak expiratory flow monitoring

Peak expiratory flow (PEF) should be recorded as the best of three forced expiratory blows from total lung capacity with a maximum pause of two seconds before blowing. The patient can be standing or sitting. Further blows should be done if the largest two PEF are not within 40 L/min.

Peak expiratory flow is best used to provide an estimate of variability of airflow from multiple measurements made over at least two weeks. Increased variability may be evident from twicedaily readings. More frequent readings will result in a better estimate, but the improved precision is likely to be achieved at the expense of reduced patient compliance. Use of electronic meters and diaries with time and date stamps can overcome problems of compliance and accuracy when recording peak flows in paper diaries. Peak expiratory flow variability is usually calculated as the difference between the highest and lowest PEF expressed as a percentage of the average PEF, although one study showed that three or more days a week with significant variability was more sensitive and specific than calculating mean differences.

The upper limit of the normal range for variability is around 20% using four or more PEF readings per day but may be lower using twice-daily readings.

NB: Peak flow manoeuvres are also potentially AGP and should be not performed during a face-to-face consultation and should not be demonstrated to the patient in the same room (training videos for peak flow are available on the internet). We recommend that peak flow should be performed in an outdoor space or a separate room where the patient can be viewed remotely, and room left vacant for an hour to ventilate.

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14. Acknowledgements

The pathway diagrams are based on those drawn up by Knowsley Community Team. The home visit guidance is based on a draft document from NCL. The palliative care guidance is based on King's College Hospital guidance.

The oxygen guidance has been developed by the London Oxygen Task Group for COVID - 19

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Appendix 1. Guideline on emergency oxygen therapy to treat hypoxic patients with suspected COVID 19 within primary care hot sites v1 (7 Apr 2020)

Purpose of this document: this g guidance on the use of emergence or confirmed COVID 19. It has been Oxygen ¹ and expert clinical conse	guide was produced fo y oxygen therapy to tre en developed using the nsus across London.	r health care pro at patients with British Thoraci	ofessionals working in hot sites with hypoxaemia associated with suspected ic Society guidelines for Emergency
 Indications for emergency oxyger patients without underlying lung of the second seco	n therapy in disease by ygen must only be n patients who have waiting for transfer I indications are: d have ox ygen erlying lung disease) s (silent hypoxaemia) 92%	Signs of resp ↑ Respirate ↓ Oxygen s ↑ Oxygen s ↑ Oxygen of (see algo Signs of CO ₂ • Drows • Heada • Flushe • Flappin	<pre>piratory deterioration: ory rate (especially if >25 per minute) saturations by pulse oximetry dose needed to maintain target sats orithm below) retention are: siness ache ed face ing Tremor</pre>
 Assessment and monitoring Pulse oximetry and staff appropriately trained in its use must be available in all locations where emergency oxygen is being used Continuous monitoring and close observation of the patient whilst using oxygen therapy is advised The oxygen saturation should be monitored continuously until the ambulance arrives and receives handover 	Emergency of treatment algo Patient identified as emergency ox (please see indic Simple face mask cannulae 2 l/n Simple face mask cannulae 4 l/n Simple face mask	cygen T prithm S s needing /gen ations) pr nasal nin I 8 Vmin	 The key aim/s: to maintain target sats at 94- 96% until the ambulance arrives. The oxygen flow should be adjusted upwards or downwards to maintain a saturation of 94% for most patients (apart from those who m ay be more at risk of CO₂ retention (see above for signs). Target saturations for people with COPD at risk of CO₂ retention are 88-92%. Information for safe supply and storage of oxygen and associated delivery devices It is recommended that all Hot sites have 1-2 people who are responsible
Recommended supply: Emergency oxygen should be available in primary care sites, preferably using oxygen cylinders fitted with high-flow regulators (delivering over 6 L/min) must be used. Recommended disposables: It is recommended that the following delivery devices should	* Change to Reserv 15 l/min Continue to give 1 Reservoir mask (u at risk of Co2 reter	oir mask 5 L via nless pt ention)	 for overseeing the supply, delivery devices and safe storage of their specific sites' emergency oxygen supply This is to ensure the partners listed below can expedite potential solutions to queries as they arise All systems containing compressed gases in UK are subject to Pressure Systems Safety Regulations 2000
 be available: 1. High concentration reservoir mask (non-rebreathe mask) for high-dose oxygen therapy 2. Nasal cannulae (preferably) or simple face mask for medium dose oxygen therapy 	Training on set up: guide does not repl training provided by on delivery of site-sp oxygen supply. It is recommended th site nominate 1-2 ox to support safe and e use within primary ca	This H ace the or Air Liquide r ecific r vat each vgen leads vffective r ne sites. r	Helpful contacts for London: should the designated oxygen lead for your hot/cold site require assistance please contact: 1) Air Liquide: alhomecare.hcpsupport@nhs.net 2) London Oxygen Team: Nelcsu.hosnelcsu@nhs.net 3) Local Home Oxygen Service Assessment and Review (HOSAR)

¹ BTS Emergency Oxygen Therapy – 2017 <u>https://www.brit-thoracic.org.uk/guality-improvement/guidelines/emergency-oxygen/</u>

Appendix 2. Oxford COVID-19 Evidence Service Findings

Are there any evidence-based ways of assessing dyspnoea (breathlessness) by telephone or video?

We found no validated tests for assessing breathlessness in an acute primary care setting. We found no evidence that attempts to measure a patient's respiratory rate over the phone would give an accurate reading, and experts do not use this test in telephone consultations. Our search identified a potentially promising test (the Roth score), which needs further research.

Pending further research, the recommendations below are based on expert opinion. A rapid survey of 50 clinicians who regularly assess patients by phone (on 20.3.20) recommended not using the Roth score (though opinions were mixed) and gave the following advice:



Appendix 3. Clinical Frailty Scale (Rockwood, 2005) Version 1.1

NHS Version: 1.1 **ROCKWOOD CLINICAL FRAILTY SCALE** 22/04/2020 London **Clinical Networks** Why use the Clinical Frailty Scale (CFS)? CFS is a global clinical measure of a person's level of vulnerability to poor outcomes. Identification of frailty helps to improve both long and short term health management. People with frailty require a more personalised approach to their needs. Recognition of frailty should be part of a holistic assessment. How to use the Clinical Frailty Scale (CFS)? The CFS can be undertaken by any appropriately trained healthcare professional with training and support The CFS is only validated for people aged \geq 65. It should not be used in younger people. people with stable long-term disabilities (for example, cerebral palsy), learning disability or autism and an individualised assessment is recommended. Be mindful of your prejudices. Just because a person is old doesn't mean they are frail. Complete the screening based on how the person's function was two weeks prior to deterioration. This requires understanding their global function and cognition which means talking to the patient, their family members and their carers as appropriate. Don't just score in the middle or be too forgiving when scoring. This is your objective assessment of a person's clinical status, and not a personal judgement of the individual. In the guide below, you are **not** comparing the pictures to the person. Ask questions! If you haven't already, please complete the 15 minute online training here. Clinical Frailty Scale* 7 Severely Frail - Completely dependent for personal care, from whatever cause (physical or Very Fit - People who are robust, active, energetic and motivated. These people commonly exercise cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months). regularly. They are among the fittest for their age. 2 Well – People who have no active disease 8 Very Severely Frail - Completely dependent, symptoms but are less fit than category 1. Often, they approaching the end of life. Typically, they could exercise or are very active occasionally, e.g. seasonally. not recover even from a minor illness. Managing Well - People whose medical problems 3 are well controlled, but are not regularly active 9. Terminally III - Approaching the end of life. This beyond routine walking. category applies to people with a life expectancy <6 months, who are not otherwise evidently frail. 4 Vulnerable - While not dependent on others for daily help, often symptoms limit activities. A common complaint is being "slowed up", and/or being tired Scoring frailty in people with dementia during the day. The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the 5 Mildly Frail - These people often have more details of a recent event, though still remembering the event itself. evident slowing, and need help in high order IADLs repeating the same question/story and social withdrawal. (finances, transportation, heavy housework, medica-In moderate dementia, recent memory is very impaired, even tions). Typically, mild frailty progressively impairs though they seemingly can remember their past life events well. shopping and walking outside alone, meal preparation They can do personal care with prompting. and housework. In severe dementia, they cannot do personal care without help. 6 Moderately Frail - People need help with all

I. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and fraility in elderly people. CMAJ 2005;173:489-495.

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outside activities and with keeping house. Inside, they

often have problems with stairs and need help with

bathing and might need minimal assistance (cuing,

standby) with dressing.

Appendix 4. Virtual ward monitoring diary example

Virtual COVID ward diary – example

Your doctor has given you, or your carer, this diary and pulse out occur has given you, or your cares into day and palace oximeter because you have symptoms of COVID 19. Covid 19 is a viral illness, which for many people is mild, but for a few it can become serious, sometimes quickly. This means that together, we need to keep a close eye on you - particularly your breathing, Now fast your heart is beating and the level of oxygen in your blood. Keep a record of these measurements in this diary – it will help you and your GP/111 doctor/healthcare professional decide on the best treatment for you.

Pulse Oximeter for heart rate and blood oxygen level

A pulse oximeter helps you to monitor how fast your heart is besting and the level of oxygen in your blood. This blood oxygen level is the most accurate way of keeping an eye ono your progress with COVID 19. An ideal oxygen level in the blood is between 95-99%. An ideal heart rate is between 60 and 100 beats per minute

How to use a pulse eximeter

Follow these instructions to make sure the pulse oximeter gives

- an accurate reading:
 Remove any nail polish or false nails and warm hand if cold
 Make sure you have been resting for at least five minutes
- before taking your measurement
- · Your hand should be resting on your chest at the level of your heart and held still
- Switch the pulse oximeter on and place it on your finger. It would be best on your middle or index finger (shown in the diagram) The reading takes time to steady. The pulse oximeter should
- be in place for at least one minute, or longer if the reading is not stable
- Record the highest result once the reading has not changed for more than 5 seconds
- Be careful to identify which reading is your heart rate and which is your axygen level.



Recording and acting on the result

Write the information in the attached diary. Start writing on the The the says baseline and record three times a day after that. Take your measurements at the same time each day. Take them when you would normally eat breakfast, lunch and tea. Take more measurements if you feel there is a change in your health.

- Call 999 i You are unable to complete short sentences at rest due to breathlessne
- . Your breathing suddenly worsens within an hour
- Your oxygen level is consistently less than 94% (more than once in an hour)
- · Your oxygen level is less than 95% when sitting or lying down
- You are gradually feeling much more breathless or
- unwell for more than two hours You are having difficulty breathing when you are getting up to go to the toilet, or similar

It is useful to keep track of your temperature if you are able to. However, as long as your oxygen level and breathing are normal you do not need to contact your GP/111 if you have a temperature. Other symptoms such as cough, muscle aches, tiredness, mild chest pain and change in taste or smell are less worrying. Paracetamol and regular fluids can help and most people will get better by themselves within 2-3 weeks. Remember to follow government self-isolation advice via the NHS website (www.nhs.uk)

However, some people with COVID 19 infection may develop other problems or have other causes for their symptoms. If you develop other concerning symptoms, the nhs website provides helpful advice on when to contact your GP/111

Returning the oximeter

We only have a limited number of pulse oximeters to loan out, but If you no longer need it, it is essential that you (or a friend if you are shielding) return it to your GP surgery. This should be in the bag provided so that it can be safely cleaned and given to other patients. This is likely to be after day 14 of your liness assuming you have started to improve. We see some patients feeling unwell again after the first week of symptoms so please keep the oximeter until 14 days have passed. Please return the diary along with the pulse oximeter so you can help us learn how to best help other patients with COVID.

Home monitoring COVID diary

First name:	Sumame	
Date of birth:	Age:	NHS no.
Lives alone: Y/N	Carer at	home: Y/N

Please record these three times a day

						-	
Days since first symptoms *		Date	Palas	Oxygen lavel %	Temp	Feeling Detteri serrei	Breathing Botton' some/
						worse	warse
Saseline r	eading						

* If you start recording your pulse oximetry five days after your first symptoms started record '5' under Day * Put in a temperature if you have a thermometer

Appendix 5. Additional guidance on pathways for patients with PRE-EXISTING lung conditions or comorbidities

Interstitial Lung Disease – Consider ceiling of care. Many patients who have established pulmonary fibrosis, of any cause, could have a poor outcome from intubation and mechanical ventilation. Patients are at greater risk of hypoxia due to baseline abnormal lung function. They will have often had advance care planning as part of their specialist care. Consider admission according to pathway 2 physiological parameters but if baseline saturations are available:

- Mild deterioration would be defined as up to 2% below their baseline
- Moderate deterioration would be defined as between 3-4% below their baseline
- Severe deterioration would be defined as 5% or more below their baseline

Pirfenidone and nintedanib antifibrotic therapy can be safely paused for 4-8 weeks during illness. Do not stop long term prednisolone and consider increasing baseline doses. Mycophenolate, mofetil and azathioprine and other immune suppressive medication would normally be paused during significant infective illnesses and restarted two weeks after recovery. Patients with interstitial lung disease should be following self-isolation guidance and if also on immune suppression consider extending this to the shielding approach.

Obstructive Sleep Apnoea – Most patients will have normal lungs but require CPAP overnight to correct daytime sleepiness. This does not affect their gas exchange and these patients should be managed as there is no pre-existing lung disease. If they need admission for hypoxia, they should take their CPAP machine with them as they may need to use it on the wards.

Bronchiectasis – During exacerbations of bronchiectasis with purulent sputum, we do not recommend routine collection of sputum samples for culture and sensitivities. If thought to be a usual exacerbation, treat with standard antibiotics (doxycycline or amoxycillin for 7-14 days), or guided by previous sputum cultures. If no response, then try empirical course of co-amoxiclav or levofloxacin (on specialist advice) for 7-14 days. If suspected COVID-19 infection, treat according to pathway (https://www.nice.org.uk/guidance/ng117/chapter/Recommendations)

Appendix 6. Resource pack to support implementation of Coordinate My Care plans at pace.

Document purpose	This resource pack has been collated to respond to the frequently asked questions to assist local health and care systems to increase use of Coordinate My Care (CMC).
Target audience	Commissioning and Transformation leads for End of Life, Urgent Care and Primary Care. CMC Strategic Commissioning Group members. Administration staff working in Primary care, Community Services and Acute Trusts. This pack is not aimed at front line staff. However, local leads may choose to use relevant information to support the local response to COVID-19
Communication channels	CMC Strategic Commissioning Group members CCG End of Life leads Relevant Clinical Networks CMC Stakeholder newsletter
Background	Coordinate My Care is an accepted record of advance care plans and referenced in the Primary Care and Community Respiratory Resource pack for use during COVID-19 (issued on the 27 ^{th of} March (Appendix 1). CMC is a recognised source of information to aid decisions about ambulance conveyance or admission avoidance.

Frequently Asked Questions:

How can we rapidly create CMC plans for people at high risk of severe illness?

- 1. Practices should identify those patients who are at very high risk of severe illness from COVID-19 because of an underlying health condition (Appendix 2)
- 2. GP practices are able to run searches on the EPR to identify patients who:
 - a. Are on their palliative care registers
 - b. A moderate or severe frailty flag
 - c. Using READ and SNOMED codes (Appendix 3).
 - d. A new EMIS Search has been published to help identify those who are likely to be in the last year of their life and not on the palliative care register: <u>https://www.england.nhs.uk/london/london-clinical-networks/our-networks/end-of-life-care/end-of-life-care-key-publications/</u>
- 3. GP practices can invite patients by text, e-mail, or letter to start their own myCMC plan. <u>www.mycmc.online</u> A template letter is available here: <u>https://www.coordinatemycare.co.uk/wp-content/uploads/2020/03/my-cmc-letter-template-for-gps.docx</u>
- 4. If a patient creates a myCMC plan, most of CMC fields are completed. An email will be sent to the registered GP practice notifying the practice that a patient has created a myCMC plan. The plan then just needs to be reviewed by a senior clinician and published.
- 5. Users can log-in to CMC either directly through their health IT systems that are configured via in-context link or by logging in with N3/HSCN access: nww.coordinatemycare.net
- 6. Offer those at risk of serious illness, should they contract COVID-19, the ability for relevant care and support information to be made visible to urgent and emergency services via a CMC plan.
- 7. Both clinical and non-clinical staff are able to create and add clinical details to a CMC plan (using information from established advance care plans recorded on their EPRs or in other formats). However, a senior clinician needs to review and publish this information.

- 8. Consider extending user access to CMC in nursing and care homes. For the duration of the COVID pandemic, the requirement for nursing and care homes to be DSPT compliant and have an information sharing agreement with CMC in place has been relaxed under COPI legislation. The DPIA relating to this was agreed by the London COVID-19 Information Governance group on the 31st of March 2020. Nursing and care homes staff should apply for logins using the online portal: <u>https://www.coordinatemycare.co.uk/joining-cmc/</u>
- 9. A CMC plan can be created very quickly. The minimum requirements necessary for a CMC care plan are:
 - a. **Consent**: If a patient has a past/previous care plan on your IT System, consider if the consent includes using CMC to share this information.
 - b. **Diagnosis**: The most significant diagnosis and purpose for creating the CMC plan
 - c. **Prognosis:** If in doubt select "years".
 - d. WHO performance status: Select one.
 - e. **Preferred Place of care:** Select "not discussed/not willing" if unknown.
 - f. **Preferred Place of death:** Select "not discussed/not willing" if unknown.
 - g. **CPR Discussions**: CPR is a medical decision. If it is medically not appropriate, please discuss with patient/family. If, as a clinician, you are unsure if CPR should be commenced you can select "not discussed/not willing" or for full CPR.
 - h. **Emergency treatment plan**: Select the appropriate recommendation/ceiling for clinical treatment. Provide free text to support emergency treatment decisions.
 - i. Medications and allergies: Only allergies are necessary.
- 10. The overall clinical responsibility for decisions about CPR, including DNACPR decisions, rests with the most senior clinician responsible for the person's care as defined explicitly by local policy. This could be a consultant, general practitioner (GP) or suitably experienced and competent nurse supported by local policy. It is recommended that anyone at Band 6 and below should not be making such decisions in isolation in any circumstance.

How can we rapidly update records for people in high-risk groups?

- 11. Identify those patients that already have a CMC care plan. Practices can see a list of their patients who have a CMC plan on the CMC portal. This list can be filtered to view those plans that are still draft, or other relevant criteria. (Appendix 5)
- 12. CMC have been commissioned to create an excel spreadsheet for each CCG to identify those patients that have a CMC plan. The search will contain: CMC plan status published/draft, CPR status and last date published. <u>Using e-mail to share this list is NOT standard practice</u>. To enable this flow of data, a short form Data Protection Impact Assessment (DPIA) has been agreed by the London COVID-19 IG group under the COPI legislation.

Please e-mail <u>Murrae.tolson@swlondon.nhs.uk</u> to provide the e-mail of the person for each CCG who should receive this list. This list can be used to identify and act on the following:

- a. Review and **publish DRAFT CMC plans**. Please note DRAFT CMC plans are NOT visible to urgent care services.
- b. Review CMC plans that were published a long time ago they may no longer be accurate. In addition there may be further information including **symptom control** guidance and access to anticipatory medication in the home which is important to add to the record.
- c. Check that the patient and **carer contact** details are correct. Administrators are able to edit and publish nonclinical items like demographic details on the CMC plan.
- d. Add **professional contacts** such as community palliative care teams contact details. This will enable those attending to contact professionals in an emergency situation for advice.

 e. Cross reference with local search identifying vulnerable to identify those who do not have a CMC plan. Consider comparing this with community or social service case lists. (Return to point 1&2)

How can we increase the number of CMC plans that are viewed?

13. Some Acute and Community Services have very few staff with CMC log-ins. The practice of viewing CMC plans may not be embedded in their usual operations. Large organisations that require access for more than 50 people can collate a list of staff who should have access to CMC and submit their details using the **batch log-in** request. Note that each member of staff needs to supply their unique e-mail address. <u>https://www.coordinatemycare.co.uk/joining-cmc/</u>. (Appendix 5.)

Some Trusts have arranged CMC logins for ED administrators and FY1s and FY2s. E-mail the attached list to <u>coordinatemycare@nhs.net</u> by 9am Monday morning for logins to be issued by close of Tuesday, or by 9am Thursday morning for log-ins to be issued by close of Friday.

14. Some Trusts have arranged for clinicians and non-clinicians to check if patient presenting at ED have a CMC plan. Attached quick guide explains how the CMC urgent care summary can be printed to attach to the admission notes. (Appendix 6)

Those considered to be at increased risk:

- Aged 70 or older (regardless of medical conditions)
- Under 70 with an underlying health condition listed below (i.e. anyone instructed to get a flu jab as an adult each year on medical grounds)
- Chronic (long-term) respiratory diseases, such as asthma, chronic obstructive pulmonary disease (COPD), emphysema or bronchitis
- Chronic heart disease, such as heart failure
- Chronic kidney disease
- Chronic liver disease, such as hepatitis
- Chronic neurological conditions, such as Parkinson's disease, motor neurone disease, multiple sclerosis (MS), a learning disability or cerebral palsy
- Diabetes
- Problems with spleen for example, sickle cell disease or have had your spleen removed
- A weakened immune system as the result of conditions such as HIV and AIDS, or medicines such as steroid therapy or chemotherapy
- Being seriously overweight (a body mass index (BMI) of 40 or above)
- Those who are pregnant.

READ and SNOMED codes relating to resuscitation.



READ codes relating to resuscitation.docx CMC Practice list functionality



CMC Quick guide Practice search.pdf

CMC Batch log-in request (50+ users)



CMC BATCH-LOGIN-UAF-5

How to find and print the CMC urgent care summary



CMC Find and print urgent care summary

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Appendix 7. Management of Homeless Patients on discharge from Hospital Emergency Departments to GLA COVID Care

Dear Colleagues,

4th May 2020

COVID-19 Pandemic: Management of Homeless Patients on discharge from Hospital Emergency Departments to GLA COVID Care

On the 14th of April the London Clinical Advisory Group agreed guidance on discharge from hospital for patients experiencing or at risk of homelessness and referral form.

In addition to this guidance we are now able to open direct referrals from emergency departments to COVID Care for those patients who do not require a hospital admission but who are displaying signs of COVID infection and who are homeless.

In this situation where the individual cannot safely self-isolate while unwell, the Emergency Department should undertake a COVID test and then contact the COVID Care facility directly via 07376185873 to discuss the transfer. Once accepted the emergency department should organise transport to the COVID Care facility Testing and transporting homeless people to this facility should avoid anyone being discharged to the street with potential COVID-19

In addition to the above, organisations should follow the usual approach, making use of local authority provision. The statutory 'duty to refer' remains a legal requirement during this time, and therefore anyone experiencing, or at risk of, homelessness must also be referred to the local authority housing department.

For emergency department staff who are not familiar with the 'duty to refer' process, Health Education England's recently launched e-learning tool is a useful resource. Search for "Duty to Refer for Frontline NHS staff" on https://portal.e-lfh.org.uk

Please see attached the guidance and referral form and contact details at Appendix A. Please do not hesitate to contact London COVID-19 Homeless Health Operations Team about the overall programme of work hlp.homelesshealthCOVID-19team@nhs.net Kind Regards,

London COVID-10 Homeless Health Operations Team

NHS England and NHS Improvement

CC CCG Pathway leads STP Leads and homeless health Clinical Leads Steering group



Transfer arrangements to COVID-CARE for symptomatic patients

Public transport should not be used. Preferably book a Black cab. If travelling in a car or minibus with no partition between the driver and patient, both should wear a surgical mask and the windows should be left open for the duration of the journey.

Surface cleaning of passenger areas should be performed after transfer

Appendix 8. Example of Post-COVID follow up clinic questionnaire for telephone review

COVID swab +/-	Positive/Negative/nil
Are you a Care-worker?	Y/N
Are you back to normal activity?	Y/N
Are you getting better?	Y/N
Do you have a cough?	Y/N
If Yes to Above Question Cough "on a scale of 0-10 where 10 is worst cough ever and 0 no cough" how is your cough now	
Breathlessness MRC before	Medical Research Council (MRC) Dyspnoea Scale Grade 1: Not troubled by breathlessness except on strenuous exercise Grade 2: Short of breath when hurrying or walking up a slight hill Grade 3: Walks slower than contemporaries on level ground because of breathlessness, or must stop for breath when walking at own pace Grade 4: Stops for breath after walking about 100m or after a few minutes on level ground Grade 5: Too breathless to leave the house, or breathless when dressing or undressing
Breathless MRC now	Medical Research Council (MRC) Dyspnoea Scale Grade 1: Not troubled by breathlessness except on strenuous exercise Grade 2: Short of breath when hurrying or walking up a slight hill Grade 3: Walks slower than contemporaries on level ground because of breathlessness, or must stop for breath when walking at own pace Grade 4: Stops for breath after walking about 100m or after a few minutes on level ground Grade 5: Too breathless to leave the house, or breathless when dressing or undressing
On a scale of 0-10 how breathless are you sitting still (where 0 is no breathlessness and 10 is your maximal imaginable breathlessness)	
On a scale of 0-10 how breathless are you walking to the bathroom (where 0 is no breathlessness and 10 is your maximal imaginable breathlessness)	
Do you have haemoptysis	Y/N
Do you have chest pain	Y/N
Nature of pain	
Do you have bleeding from anywhere?	Y/N
Do you have fever, feel hot and cold /shivery	Y/N
Have you been suffering from fatigue?	Y/N
Any other symptoms?	
Trauma questions- only for NIV ITU	
Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?	1: Not at All 2: A Little Bit 3: Moderately 4: Quite A Bit 5: Extremely
Feeling very upset when something reminded you of a stressful experience from the past?	1: Not at All 2: A Little Bit 3: Moderately 4: Quite A Bit 5: Extremely
Gad score	
I PHQ4	

Appendix 9: Specialist Assessment Clinic Referral Form for GPs

Access to the Specialist Assessment Clinic is for patients believed to have post COVID syndrome as per the NICE guidance and who require further clinical assessment and investigations. Patient access to this pathway should be irrespective of previous positive SARS-Cov-2 serology or clinical diagnosis in the absence of a clinical test. Where there is not a clinical need for a patient to access the specialist assessment clinic, a primary care team may determine a patient may instead need to be referred directly for rehabilitation. Local routes for referral should be used in this instance in alignment with local implementation plans.

Patient Information						
Patient Details						
First name						
Surname						
D.O.B						
NHS number						
Gender/Transgender identifier						
Patient Address (postcode)						
Ethnicity						
Preferred choice of communication						
Next of Kin Name and Contact						
Details						
Patient Clinical Details						
Allergies						
Current Medication						
Smoking status						
Height		BMI:				
Weight						
Is the patient under the care of any						
other services?						
	Co-morbidities (Y/N) (required)					
Diabetes						
Hypertension						
Chronic kidney disease						
Ischaemic heart disease						
Chronic respiratory disease e.g.						
Asthma/COPD						
Mental health problem e.g.						
depression, anxiety, personality						
disorder						
Other relevant comorbidities known						
to cause worse COVID-19 outcomes						
	Clinical Overview					
Date of previous positive COVID-19						
swab (if performed)						
History						
Additional nations poods or required adaptations						
Auditional patient needs of required adaptations						

Examination findings							
Main symptoms and issues that need addressing							
	U						
Individual goals and aspirations							
	Bedside Tes	ts (required)	Decult				
lest		Result					
Additional (resting level)							
Sitting (standing PD	Sitting		Standing				
1 minuto cit to stand tost	Sitting.	Number	Stanuing.	Post ovygon saturations:			
	completed:	rests/stor	ות הכי	Post-oxygen saturations.			
	completed.	16515/510	5.				
Other (i.e. MRC breathlessness scale)							
	Blood Test	s (required)					
Test			Result				
COVID-19 serology							
Full blood count							
Urea and electrolytes							
Liver function tests							
C-reactive protein							
Brain natriuretic peptide							
Ferritin							
Vitamin D level							
Cortisol (if patient is to be fatigued -							
to be done at 9am)							
Other Tests	s (performed withi	n the last 4 we	eeks) <i>(requ</i>	ired)			
Test	Result						
Chest x-ray							
Electrocardiogram (where available)							
COVID-19 Newcastle Post-COVID							
Syndrome Follow Up Screening							
Questionnaire OR COVID-19							
Yorkshire Rehabilitation Screening							
tool (required). Please attach results.	Defermeld	fo					
Data of Referral	Referral In	normation					
Date of Keterral							
Neierral Source							
henefit from the Specialist							
Assessment Clinic?							

