

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

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This document has been reviewed and re-released regularly, but it is now anticipated that this will be the ultimate iteration. Please email england.resp-cnldn@nhs.net 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	<ol style="list-style-type: none"> 1. Clarified that Roth Scores are not advised for use in the assessment of COVID-19 symptoms. 2. Updated antibiotic prescription advice in line with NICE guidelines. 3. Updated hot and cold site/zoning principles to support implementation. 4. Included a note that consideration should be given to making reasonable adjustments when providing remote services. 5. Aligned pathway diagrams and content to national symptom assessment categories used by 111 services. 6. Included signposting into the national primary care SOPs and emphasised building links with local acute advice and guidance mechanisms. 7. Aligned guidance with BTS guidance where required 8. Emphasised the need to discuss and complete Advance Care Planning and preferred place of care, including additional signposting to CMC resources. 9. Updated PPE guidance as per most recent PHE guidance. 10. Aligned and updated palliative care to new NICE guidelines. 11. Included references to ethical decision making and palliative care resources 12. Provided further clarity and guidance on the supply and provision of oxygen in primary care, community care, on discharge and within nursing/care homes. 13. Enhanced navigation of documents through improving section ordering, naming and numbering. 14. Additional appendix on CMC resources and breathlessness leaflet 15. Inserted an introduction for section 2 to clarify what care settings this respiratory resource pack is provided for. 16. Small changes to spelling, contributors and grammar. 17. Updated links where new/updated guidance available
3	15.4.20	16.4.20	<ol style="list-style-type: none"> 1. Emergency oxygen therapy to treat hypoxic patients with suspected COVID-19 within primary care hot sites 2. New guidance on safety netting for follow up of patients suspected COVID-19 3. Updated guidance on identifying silent hypoxic patients 4. New guidance on safety netting post discharge 5. Alignment to NICE guidelines on ICS and removal of ICS 6. Updates to target saturations admission thresholds, to take into account national and LAS guidance
4	24.4.20	27.4.20	<ol style="list-style-type: none"> 1. Updated pathway diagram 1 and 2 2. New pathway guidance for use by care home staff Review of CPR guidance 3. Updated information for follow up on patients with co-morbidities 4. Updated antibiotic treatment guidance to align with NICE 5. Updates and alignment relating to treatment preferences 6. Latest version of questions from ACRX 7. Updated appendix on treatment pathway for those with Bronchiectasis 8. Updated CFS poster 9. Updated Palliative care treatment guidelines
5	12.5.20	13.5.20	<ol style="list-style-type: none"> 1. Updated guidance on use of oxygen therapy 2. Updates on reuse of EOL medicines, advance care planning 3. Direction to links for verification of death guidance 4. Updated links where required. 5. Management of Homeless Patients on discharge from Hospital Emergency Departments
6	21.5.20	8.6.20	<ol style="list-style-type: none"> 1. New guidance on how to diagnose other respiratory diseases during COVID-19 2. Updates to London update to care home staff guidance 3. Updates on virtual wards
7	9.7.20		<ol style="list-style-type: none"> 1. Updates to align to national guidance on assessment pathway and oxygen sats. 2. Further advice and signposting to guidance on follow up of post-COVID-19 symptoms 3. Update to align to guidance on remote monitoring with examples provided

Upcoming release schedule and expected content

Version	Expected circulation date	Expected updates
N/A	N/A	N/A



1. Introduction

Unprecedented times require an unprecedented response. To mount a co-ordinated response and communicate consistently will require primary care and community staff to work as one team – 111, Integrated Urgent Care, Primary Care (both in and out of hours), Community Respiratory Teams, and a pool of staff responding to the call for extra help. This requires the redesign of the entire community pathway and the establishment of new methods of working.

This guidance has been co-authored at pace (contributors list under section 9). It is anticipated that it will change as knowledge about COVID-19 increases and as the system changes in response over the coming weeks and months. The document will be reviewed and updated as necessary on a weekly basis.

2. Out of Hospital settings, assessments, pathways and treatments for patients with suspected COVID-19

This section provides primary and community care staff guidance on settings, assessment, pathways and appropriate treatment advice for those with suspected COVID-19 symptoms. Out of hospital care settings that have been considered within the scope of this document include Primary Care Hot and Cold sites, patients' homes and nursing/care homes.

2.1. Zoning or Hot and Cold Sites in primary care during COVID-19

There are several models of care provision being implemented across Primary Care estate to reduce the risk of transmission between people requiring face to face assessment and treatment during the COVID 19 pandemic. More information on zoning and hot and cold site are provided within national primary and community SOPs which can be found here:

https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0133-COVID-19-Primary-Care-SOP-GP-practice_V2.1_6-April.pdf

Until testing is available, 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.

Triage and assessment of patients by default, is to be carried out remotely, by telephone or preferably virtual consultation. "Face to face" assessment should be undertaken in cases where this is imperative to assessment and where the benefit of so doing outweighs any risk. An example could include examination of a patient with suspected acute abdomen. The decision to undertake a face-to-face assessment must be made by 2 or more clinicians, in order to ensure that such assessment is necessary beyond what is possible via a virtual consultation.

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.



It is recommended that if advice and support mechanisms are available locally from respiratory or acute physicians/palliative care consultants, sites and zones consider building links.

- **Zoning** – this approach **manages both cohorts (high suspicion of COVID-19 and lower suspicion of COVID-19) within all practices but with designated areas and workforce to maintain separation**. This requires designating a specific zone within each practice to manage those with COVID symptoms. This option reduces the need for significant reconfiguration of existing patient flows, acknowledging that flows have already changed to remote consultations. The **interface between the zones requires careful management** to minimise cross contamination with strict decontamination protocols in place.

Not all premises are likely to have separate entry/exits point to help maintain separation and reduce risk. When seeing patients, physical separation by isolating patient in a specified room with a video/phone link to a healthcare professional in another room, may be possible.

- **Hot & Cold Sites** – Practices may wish to adopt such a model to better manage increasing demand as infection rates increase. In practice, this **means dividing groups of practices into ‘hot’ sites that manage high suspicion COVID-19 patients only and ‘cold sites’** that manage lower suspicion of COVID-19 patients only.

Cold sites are important to undertake necessary assessment and treatment of lower suspicion of COVID-19 patients, including wound dressings, childhood immunisations etc.

- **Mixed Model** – Each PCN/CCG may have a mixture of the two models.

NB:

- PPE guidance needs to be followed with care in all situations.
- Workforce capacity constraints means pooling of staff may be required.
- We are expecting more national guidance about this very soon.
- Please see appendix 1 for guidelines on emergency oxygen therapy to treat hypoxic patients with suspected COVID 19 within primary care hot sites



2.2. Respiratory assessment and follow up pathways for patients with suspected COVID-19 in the community across all settings

2.2.1. Remote Assessment/Telephone Triage with Patient or Carer

Triage should be carried out by experienced clinicians. See Box 1 below for guidance **and** Appendix 3 for the Oxford COVID-19 Evidence Service. It is advised that Roth Scores are not used as part of assessments with patients or carers.

Box 1. Remote Assessment/Telephone Triage with Patient or Carer

1. Screen for symptoms of COVID-19 infection

- Do they have fever **>37.8?**
- If no thermometer, have they felt shivery, achy, or are they hot to touch?
- Do they have a new continuous cough, different to usual?

2. Screen for severity of illness. Suggested questions:

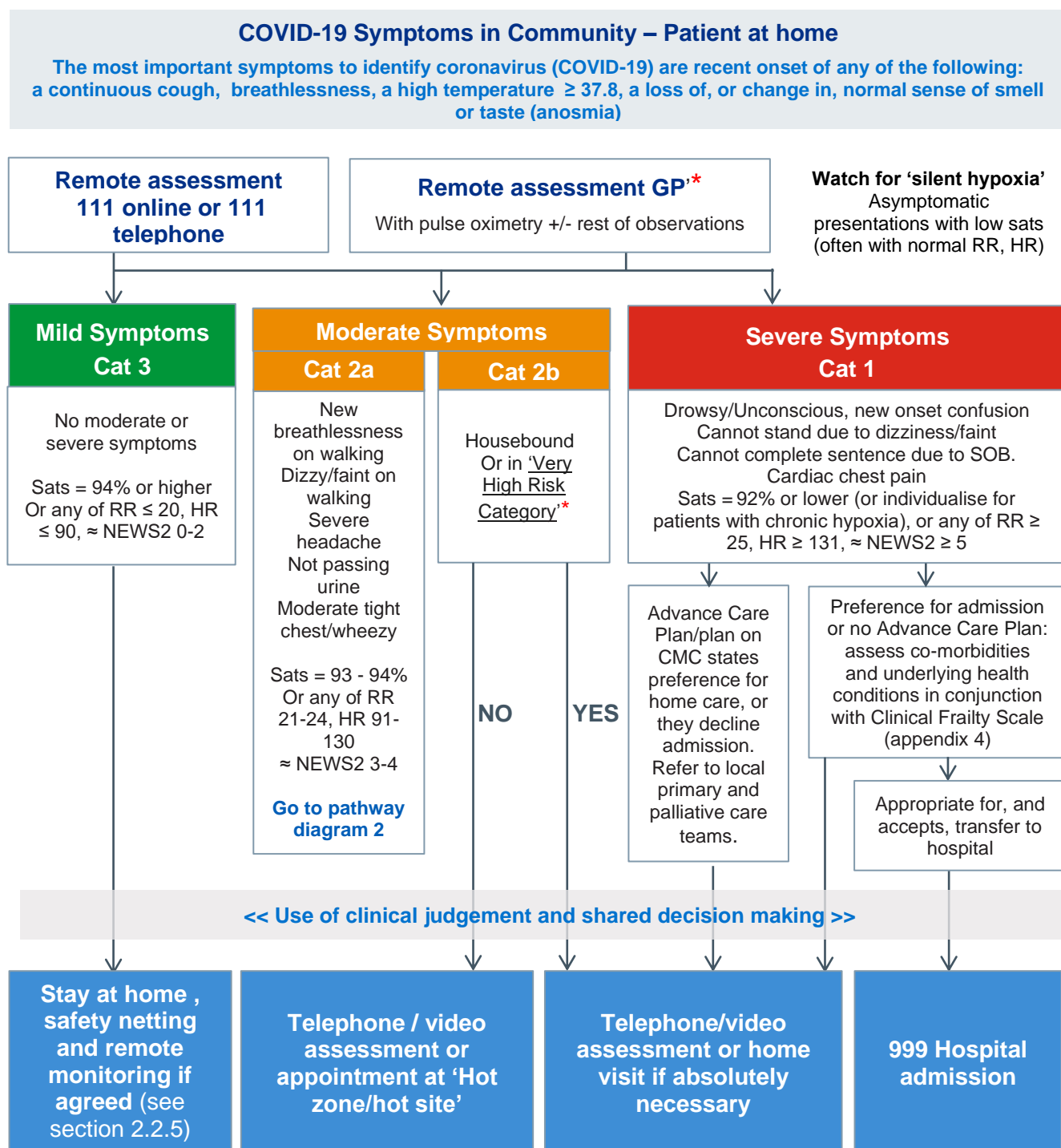
- *"How is your breathing is today?"*
- *"Do you have an oximeter at home or have you noticed any blue discolouration of your lips?"*
- *"Are you so breathless that you are unable to speak more than a few words?"*
- *"Are you more breathless than usual on walking or climbing stairs?"*
- *"Do you feel dizzy, faint or have a headache?"*
- *"When was the last time you went to the toilet and passed urine?"*
- Ask about other symptoms of severity e.g. collapse, chest pain, signs of sepsis, confusion?

Please note that patients may be "comfortably hypoxic". When assessing, please check if there has been any deterioration in these question from the day before. There is no accurate way to assess hypoxia without pulse oximetry (unless patient is obviously cyanosed) - so consider how to do this (patient has own device, or deliver device to patient (mobile oximetry service), or patient to attend hot site for assessment and collect oximeter for home monitoring).

3. **Assess whether increased risk of severe illness** with COVID-19 against the list of conditions which lead to increased risk (see appendix 2)
4. **Do they have an established advance care plan? Is it documented on Co-ordinate My Care? If not, and it is appropriate, explore wishes and consider capacity.**
5. **Decide** whether for home management (see pathway diagram 1 below)
6. **Clinical judgement is crucial and overrides the pathway**



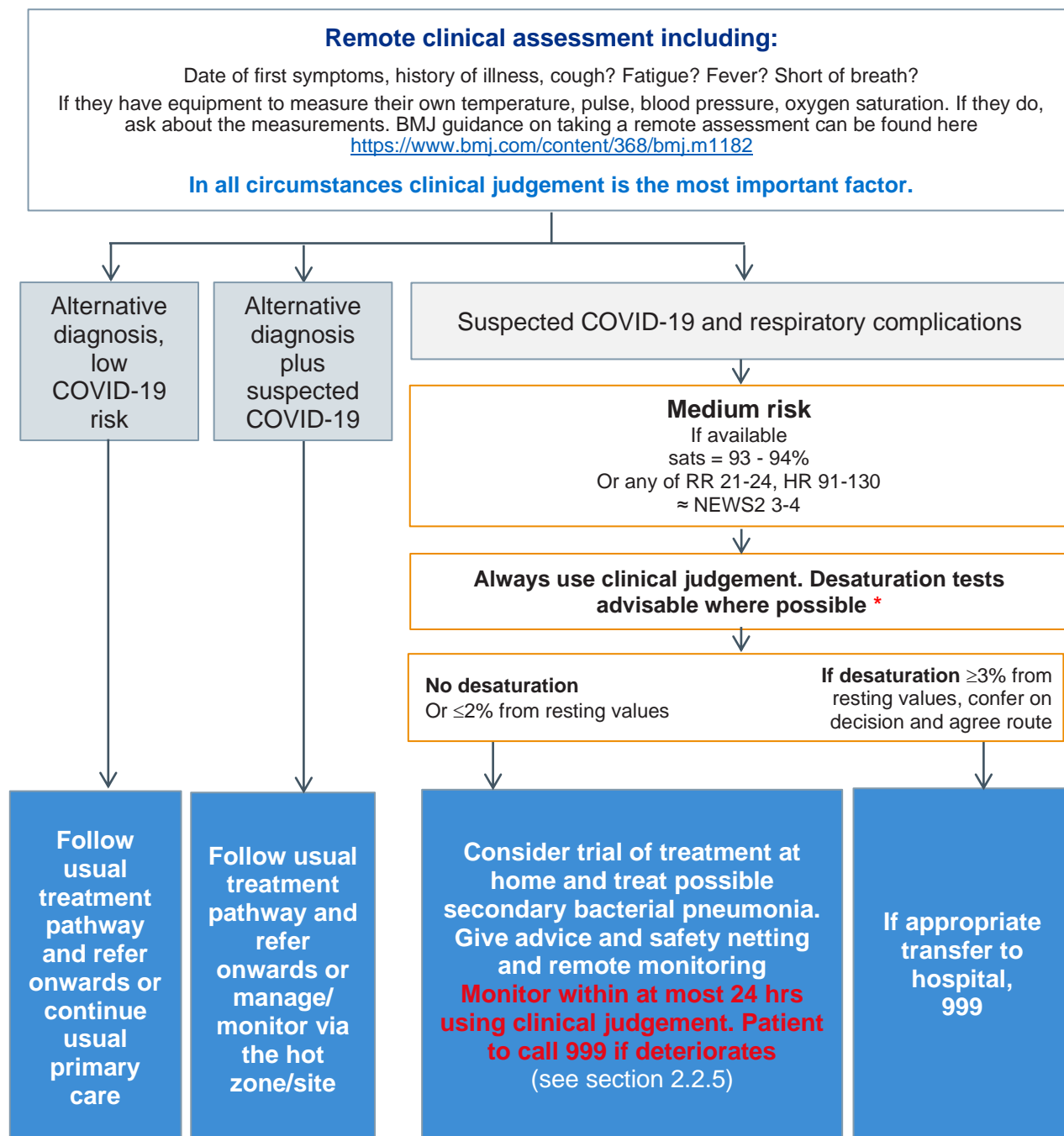
2.2.2. Pathway diagram 1. Categorising patients with COVID-19 symptoms in the Community



* 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, 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, carers and relatives. For advice re: mild or moderate symptoms, patients / carers should be directed to the link below: <https://www.nhs.uk/conditions/coronavirus-covid-19/>. Categories 1, 2a, 2b and 3 relate to the national categorisation being used by 111 services.

2.2.3. Pathway diagram 2. Triaging patients with moderate symptoms of COVID-19 but NO pre-existing lung disease or significant comorbidities

Triage of patients with moderate symptoms of COVID-19 but no pre-existing lung disease / significant comorbidities



*Either 1 min sit-to-stand or 40 steps. <https://www.cebm.net/covid-19/what-is-the-efficacy-and-safety-of-rapid-exercise-tests-for-exertional-desaturation-in-covid-19/> Review patient's full responses to exercise, including RR and HR as well as desaturation.

2.2.4. 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 pathway 2 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-for-healthcare-professionals-treating-patients-with-asthma/>

COPD – Where a patient with COPD develops increased cough or increased breathlessness in keeping with a previous exacerbation, it should be treated as an exacerbation and they should take their appropriate rescue medication. Oral corticosteroids can also be considered if known concomitant asthma and / or history of 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 bronchodilation, breathing exercises and pacing, for example and where appropriate. Oral corticosteroids should be avoided in COVID-19 suspected infection (fever or new cough that is different from usual).

Consider admission according to algorithm physiological parameters but if baseline O2 pulse oximetry sats 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 more than 4% below their baseline

If on Long Term Oxygen Therapy (LTOT) discuss ceiling of care and consider admission if sats $<88\%$ on their standard dose of LTOT(<https://www.brit-thoracic.org.uk/document-library/quality-improvement/covid-19/copd-and-covid-19-for-healthcare-professionals/>). For additional guidance on Interstitial Lung Disease, Obstructive Sleep Apnoea, Bronchiectasis please see appendix 7.



2.2.5. Remote monitoring and safety netting for patients with suspected or confirmed COVID-19 infection who have been advised they can stay at home

Guidance given in section 2.2.3 is based on national guidance. The oxygen saturation level for the medium risk group is slightly lower than previously used (93-94%). This lower level may have been chosen to reduce the workload on secondary care at a time of a major surge. There is some evidence that patients with this level of oxygen saturation can be safely managed in the community with appropriate monitoring. Whilst capacity is available, we would suggest that clinical judgement is used. If there is a second surge and secondary care capacity is limited, then patients in the medium risk group can be managed in a community setting and this section outlines a possible pathway using “Virtual Wards”.

Virtual Wards are currently under evaluation and may use digital technology to help identify patients who are deteriorating and needing urgent review. To aid monitoring, patients need to be provided with a pulse oximeter to measure their oxygen levels throughout the day. Each STP/ICS should have access to a supply of pulse oximeters for use in primary care, and each may have its own preferred digital solution to help manage the workload.

2.2.5.1. Patient management and safety netting

Practices and services should maintain a list of known/suspected COVID-19 patients who are being managed at home. This list should be reviewed daily, highlighting through buddying and/or huddles where difficult decisions might have been made. The most appropriate pathway for each patient should be informed by their current health and history.

Frequency and method of contact with these patients should be as directed by the GP and recorded (see COVID virtual ward pathway). Individuals who had moderate symptoms should be followed up proactively to monitor for deterioration.

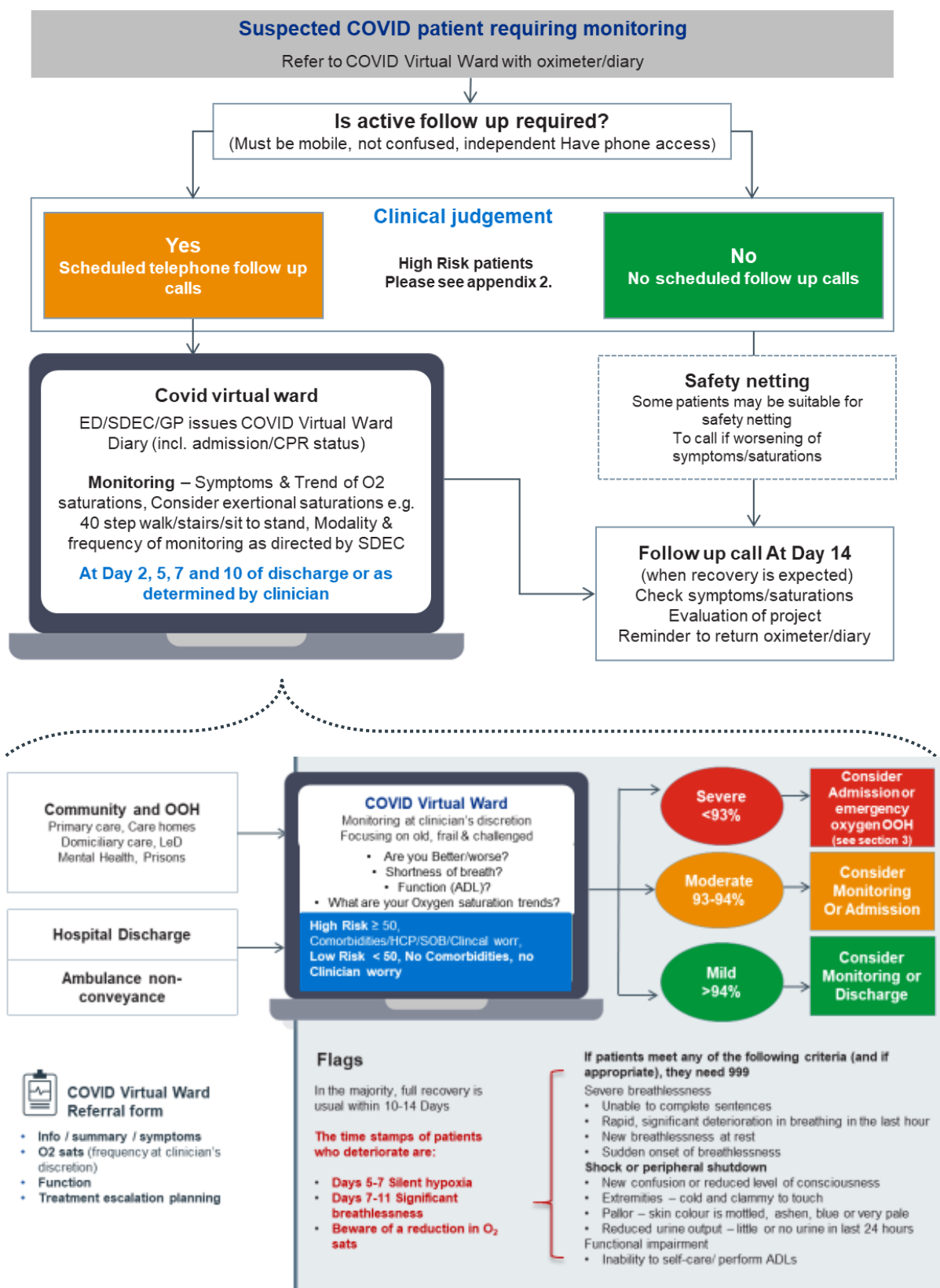
Box 2. safety netting guidance for GP monitoring of Category 2a/2b patients:

- **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 - <https://www.cebm.net/covid-19/what-is-the-efficacy-and-safety-of-rapid-exercise-tests-for-exertional-desaturation-in-covid-19/>). Discharge from follow up if symptoms improving and oxygen saturations stable or improving over 48 hours and treat as low risk

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? We appreciate these conversations would usually happen face to face. These conversations will need to take place over the phone or in video consultation as will any psychological support. We recommend having regular team meeting/buddy conversations to support you in these challenges.



2.2.5.2. COVID virtual ward remote monitoring pathway



An example of a virtual ward diary is provided in appendix 5.

Virtual ward monitoring may be:

1. Monitoring via oximeter and daily phone calls from health provider team
2. Monitoring via a remote monitoring web or app- based portal such as Huma medopad or similar applications. Healthcare teams can prioritise individuals based on self-submitted data; alerts are generated if set, individualised, thresholds are exceeded. In-build telemedicine capabilities may allow for video call to obtain further information; additional tests or hospital admission can be arranged, if required. Healthcare notes can be documented within set templates within GP systems. (NB: NHSX intend to issue a procurement framework for remote monitoring tools in September)

For the group using an application such as medopad, self-submitted data is entered 3 x daily into the portal for oxygen saturation (from supplied oximeters), symptoms, body temperature, respiratory rate, heart rate. Recorded data will allow for trends to be visible throughout the use of the system. In line with NHS Symptoms ascertained are, in order of severity predictiveness:

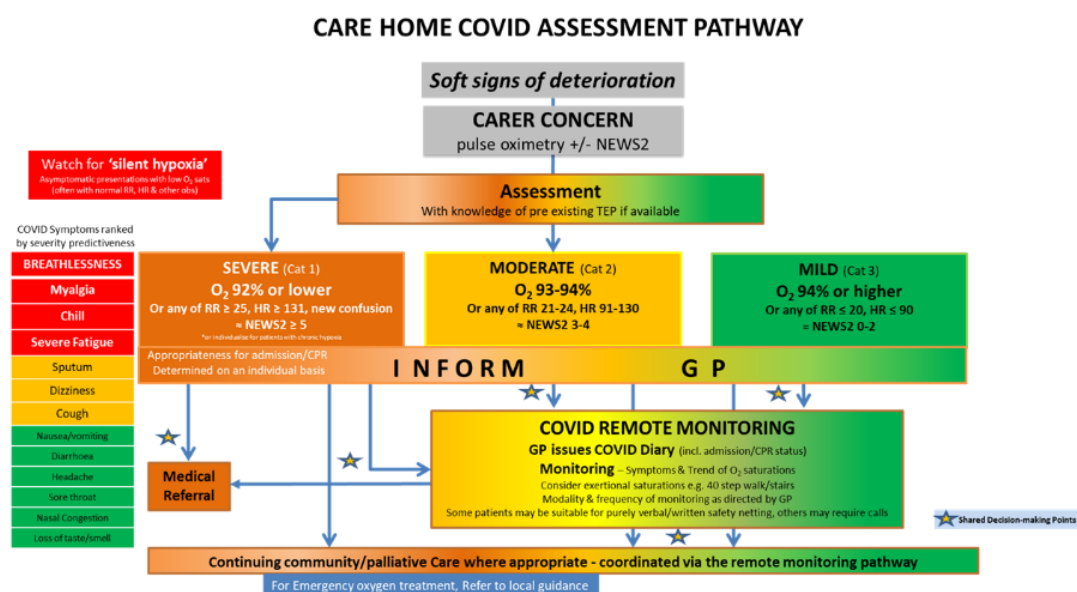
- Breathlessness (at rest and on activity)
- Myalgia
- Chill
- Severe fatigue
- Sputum
- Dizziness
- Cough
- Nausea/ Vomiting
- Diarrhoea
- Headache
- Sore throat
- Nasal congestion
- chest pain or tightness,
- anosmia/dysgeusia
- loss of consciousness,
- palpitations.

Each symptom can be rated as none, mild, moderate, or severe.



2.2.6. National Care Home Assessment Pathway

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



A multi-agency forum in the London region has produced a guide for suspected COVID-19 in Residential and Nursing Care Residents for use by care home staff. Some pertinent elements of this guide are detailed below:

Isolation for people who walk around for wellbeing (dementia, learning disabilities, autism) – use standard operating procedures for isolating residents who walk around for wellbeing ('wandering'). Behavioral interventions may be employed but physical restraint should not be used. When caring for, or treating, a person who lacks the relevant mental capacity during the COVID-19 pandemic, please follow [government guidance](https://www.gov.uk/government/publications/coronavirus-covid-19-looking-after-people-who-lack-mental-capacity).
<https://www.gov.uk/government/publications/coronavirus-covid-19-looking-after-people-who-lack-mental-capacity>

What to do in case of an outbreak? – an outbreak is defined as **two or more residents** in the care home diagnosed with symptoms compatible with COVID-19. LCRC will provide infection control support and send test kits for all residents and asymptomatic staff on the day. The results will be sent back to you from LCRC via email (nhs.net email or password protected) along with guidance on what to do next, depending on negative or positive results.

- **Contact** the Public Health England London Coronavirus Response Cell in the event of an outbreak
- **Phone Number:** 0300 303 0450/ Tel 0300 030 0340
- **Email:** LCRC@phe.gov.uk
- **Update:** Capacity Tracker, your Local Authority and RIDDOR
- **Guidance:** Admission and Care of Residents during COVID-19 Incident
<https://www.gov.uk/government/publications/coronavirus-covid-19-admission-and-care-of-people-in-care-homes>
- If there are no symptomatic residents and for ongoing outbreaks, testing can be arranged via the DHSC portal at <https://request-care-home-testing.test-for-coronavirus.service.gov.uk/> or phone 0300 303 2713

Symptomatic care home staff - should follow national guidance on self-isolation, details can be found on this link, and arrange a test as an essential worker via <https://www.gov.uk/apply-coronavirus-test-essential-workers>

How to access Personal Protective Equipment (PPE) –

- Order PPE through your normal supplier. If this isn't possible arrangements have been made with seven wholesalers to provide PPE to the social care sector.
- Contact your Local Authority if you are still unable to get PPE provision.
- Guidance for Residential Care Providers:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878099/Admission_and_Care_of_Residents_during_COVID-19_Incident_in_a_Care_Home.pdf

Resources and Support for Care Home Staff –

- Guidance on Home Care Provision <https://www.gov.uk/government/publications/covid-19-residential-care-supported-living-and-home-care-guidance/covid-19-guidance-on-home-care-provision>
- COVID-19 Care Platform https://webapp.mobileappco.org/m/COVID-19CARE/?appcode=COVID-19CARE&controller=InfoDetailViewController&id=5223054&tab_id=9872509
- Queens Nursing Institute Facebook Page
<https://www.facebook.com/pg/TheQNI/posts/>
- RIDDOR reporting of COVID-19
<https://www.hse.gov.uk/news/riddor-reporting-coronavirus.htm>
- Good Thinking – London's digital mental health service
<https://www.good-thinking.uk/coronavirus/>
- NHS IAPT [https://www.nhs.uk/service-search/other-services/Psychological%20therapy%20\(NHS%20IAPT\)/LocationSearch/396](https://www.nhs.uk/service-search/other-services/Psychological%20therapy%20(NHS%20IAPT)/LocationSearch/396)
- 'Mental Health and Psychosocial Support for Staff, Volunteers and Communities in an Outbreak of Novel Coronavirus'
https://pscentre.org/wp-content/uploads/2020/02/MHPSS-in-nCoV-2020_ENG-1.pdf
- Mental Health at work – taking care of your staff
<https://www.mind.org.uk/workplace/mental-health-at-work/taking-care-of-your-staff/>
- Living with worry and anxiety amidst global uncertainty
[https://www.practitionerhealth.nhs.uk/media/content/files/guide_to_living_with_worry_and_anxiety_amidst_global_uncertainty_en-gb\(2\).pdf](https://www.practitionerhealth.nhs.uk/media/content/files/guide_to_living_with_worry_and_anxiety_amidst_global_uncertainty_en-gb(2).pdf)
- Preventing Work Related Stress
<https://www.hse.gov.uk/gohomehealthy/assets/docs/StressTalkingToolkit.pdf>
- Going Home checklist
https://www.mind.org.uk/media/34925454/tcoy_leaving_work_cl_poster_stg1_v3.pdf
- Talking to relatives
<https://www.realtalktraining.co.uk/covid19-evidence-based-advice-difficult-conversations>
- Digital Social Care
<https://www.digitalsocialcare.co.uk/>

Communication with the NHS –

- Use [Restore2](https://wessexahsn.org.uk/projects/329/restore2) (a deterioration and escalation tool) if you have been trained to do so
- Where appropriate please ensure that residents are offered advance care planning discussions and that their wishes are recorded on Coordinate My Care (CMC). Make



sure you have easy access to the residents CMC or Ceiling of Treatment plan when you call NHS 111 *Star Line (or 999)

Do you have NHS Mail? –

- Send emails directly to your GP, Community Team and Hospital
- Contact hlp.londonchnhsmailrequests@nhs.net to get an **NHS.net email** set up
- Please [register](#) and use **Capacity Tracker** to support hospital discharge planning. Continue to complete the [Market Insight tool](#) if you normally do.

2.2.7. Home visits and face to face contact (including admission avoidance)

Box 3. Management of home visit / face to face contact in suspected COVID-19 +ve patients

- Only visit at home if there is no remote alternative. Discuss need to visit with senior colleague/peer. Consider what information will be gained from it that cannot be ascertained remotely and how this will change the outcome
- Review PPE guidance daily and adhere to the recommendations
- Ask the patient to wear a mask during the consultation to protect them and the case worker- Suggest passing mask through letterbox to patient prior to entry
- Minimise physical contact with the patient and carer and keep 2m distance if possible
- Do not perform for chest physiotherapy, spirometry, PEFr, CO monitoring or FeNO or any other aerosol generating procedure
- Sputum samples for management of bronchiectasis should be discussed with specialist
- Viral swabs should not be collected
- Monitor patients using SpO2, RR, HR (and BP if required)
- Discuss advance care plans and wishes if appropriate and seek consent to urgently document on Coordinate My Care (CMC).
- Escalate by calling 999 if required and appropriate according to treatment escalation plans/advance care plan. Otherwise, make a plan for future monitoring e.g. telephone / video or face to face
- Dispose of all PPE at visit end according to national guidance



2.3. PPE Requirements

For guidance on the latest advice for the use of PPE or where to get it please see:

<https://www.england.nhs.uk/coronavirus/publication/guidance-supply-use-of-ppe/>

The following poster also provides current national recommendations for use in different care settings.



Recommended PPE for primary, outpatient and community care by setting, NHS and independent sector

Setting	Context	Disposable Gloves	Disposable Plastic Apron	Disposable fluid-resistant coverall/gown	Surgical mask	Fluid-resistant (Type IIR) surgical mask	Filtering face piece respirator	Eye/face protection ¹
Any setting	Performing an aerosol generating procedure ² on a possible or confirmed case(s) ³	✓ single use ⁴	✗	✓ single use ⁴	✗	✗	✓ single use ⁴	✓ single use ⁴
Primary care, ambulatory care, and other non-emergency outpatient and other clinical settings e.g. optometry, dental, maternity, mental health	Direct patient care – possible or confirmed case(s) ³ (within 2 metres)	✓ single use ⁴	✓ single use ⁴	✗	✗	✓ single or sessional use ^{4,5}	✗	✓ single or sessional use ^{4,5}
	Working in reception/communal area with possible or confirmed case(s) ³ and unable to maintain 2 metres social distance ⁶	✗	✗	✗	✗	✓ sessional use ⁴	✗	✗
Individuals own home (current place of residence)	Direct care to any member of the household where any member of the household is a possible or confirmed case ³	✓ single use ⁴	✓ single use ⁴	✗	✗	✓ single or sessional use ^{4,5}	✗	✓ risk assess single or sessional use ^{4,5}
	Direct care or visit to any individuals in the extremely vulnerable group or where a member of the household is within the extremely vulnerable group undergoing shielding ⁷	✓ single use ⁴	✓ single use ⁴	✗	✓ single use ⁴	✗	✗	✗
	Home birth where any member of the household is a suspected or confirmed case ^{3,7}	✓ single use ⁴	✓ single use ⁴	✓ single use ⁴	✗	✓ single or sessional use ^{4,5}	✗	✓ single or sessional use ^{4,5}
Community-care home, mental health inpatients and other overnight care facilities e.g. learning disability, hospices, prison healthcare	Facility with possible or confirmed case(s) ³ – and direct resident care (within 2 metres)	✓ single use ⁴	✓ single use ⁴	✗	✗	✓ single or sessional use ^{4,5}	✗	risk assess sessional use ^{4,5}
Any setting	Collection of nasopharyngeal swab(s)	✓ single use ⁴	✓ single or sessional use ^{4,5}	✗	✗	✓ single or sessional use ^{4,5}	✗	✓ single or sessional use ^{4,5}

Table 2

1. This may be single or reusable facepiece protection/full face visor or goggles.
2. The full list of aerosol generating procedures (AGPs) is within the IEC guidance (note APGs are undergoing a further review at present).
3. A case is any individual meeting case definition for a possible or confirmed case: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases/investigation-and-initial-clinical-management-of-possible-cases-of-wuhan-novel-coronavirus-wncv-infection>
4. Single use refers to disposal of PPE or decontamination of reusable items e.g. eye protection or respirator, after each patient and/or following completion of a procedure, task, or session; dispose or decontaminate reusable items after each patient contact as per Standard Infection Control Precautions (SICPs).
5. A single session refers to a period of time where a health care worker is undertaking duties in a specific care setting/exposure environment e.g. on a ward round providing ongoing care for inpatients. A session ends when the health care worker leaves the care setting/exposure environment.
6. Sessional use should always be risk assessed and considered where there are high rates of hospital cases. PPE should be disposed of after each session or earlier if damaged, soiled, or uncomfortable.
7. Non-clinical staff should maintain 2m social distancing, through marking out a controlled distance; sessional use should always be risk assessed and considered where there are high rates of community cases.
8. Risk assessed use refers to utilising PPE when there is an anticipated/likely risk of contamination with splashes, droplets of blood or body fluids.
9. Initial risk assessment should take place by phone prior to entering the premises or at 2 metres social distance on entering, where the health or social care worker assesses that an individual is symptomatic with suspected/confirmed cases appropriate PPE should be put on prior to providing care.
10. Risk assessed use refers to utilising PPE when there is an anticipated/likely risk of contamination with splashes, droplets of blood or body fluids.
11. For explanation of shielding and definition of extremely vulnerable groups see guidance: <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>

Aerosol generating procedures (AGP's) 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;
- 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 nebulisation 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>)

However, this information may change and we would still recommend caution and use standard PPE (fluid resistant mask, eye protection, apron and gloves) if a nebuliser is used. 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.

2.4. Cardiopulmonary Resuscitation

Please refer to any established records of resuscitation decisions 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 (<https://www.gov.uk/government/publications/novel-coronavirus-2019-ncov-interim-guidance-for-first-responders/interim-guidance-for-first-responders-and-others-in-close-contact-with-symptomatic-people-with-potential-2019-ncov>):

*"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."*

At the time of writing, we acknowledge that there is disagreement between PHE and the Resuscitation Council UK around Cardiopulmonary resuscitation in healthcare settings. Chest compressions and defibrillation (as part of resuscitation) are not considered AGPs by PHE whereas RCUK recommends full PPE for chest compressions. We recommend that first responders should do a risk assessment and at least attach an automated defibrillator and call LAS. Then it is a personal choice whether to commence chest compressions (but not mouth to mouth), and if so, cover the patient's mouth and nose with a cloth, while awaiting the arrival of other personnel who will undertake airway manoeuvres. On arrival of the team, the first responders should leave the scene before any airway procedures are carried out and only return if needed and if wearing full AGP PPE.

This advice may change with forthcoming national guidance.



2.5. Treatments considered appropriate to specific care settings

In an out of hospital setting, treatment options should always be considered in the context of any established Advance Care Plan (ACP).

Not all patients will benefit from hospital 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. When possible, discuss the risks, benefits and possible likely outcomes of the treatment options with patients with COVID-19, and their families and carers, so that they can express their preferences about their treatment and escalation plans. (NICE COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community NICE guideline [NG163] 3.4.2020)

In London some patients have provided consent to create a Co-ordinate My Care (CMC) record with their treating or palliative care teams. It is essential to look for these to see if a record has been created. It may contain essential information which can aid decision making.

CMC 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 7. Training resources are available at the link below. These includes a five minute video overview.

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

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.bma.org.uk/advice-and-support/covid-19/ethics/covid-19-ethical-issues>

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

https://elearning.rcgp.org.uk/pluginfile.php/149288/mod_resource/content/2/COVID%20EOL%20Community%20Charter_Final.pdf



2.5.1. Discussing 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. These should be documented and shared urgently via CMC so it can be accessed by those in urgent and emergency care.

The following joint statement on Advance Care Planning has been provided by the BMA, CPC, CQC and RCGP (30.3.2020).

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 guidelines 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, there is 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.'



2.5.2. Treatments to consider at home or nursing/care home

- Do not offer an antibiotic 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 in particular may lead to C.diff 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)
- alternative: 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-confirmed-pneumonia>

- Prednisolone for exacerbation of asthma (not responding to escalation of inhaled therapies) but not for COPD unless 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)
- Please see section three for the use of oxygen therapy in out of hospital settings.

2.6. Post-discharge

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/>

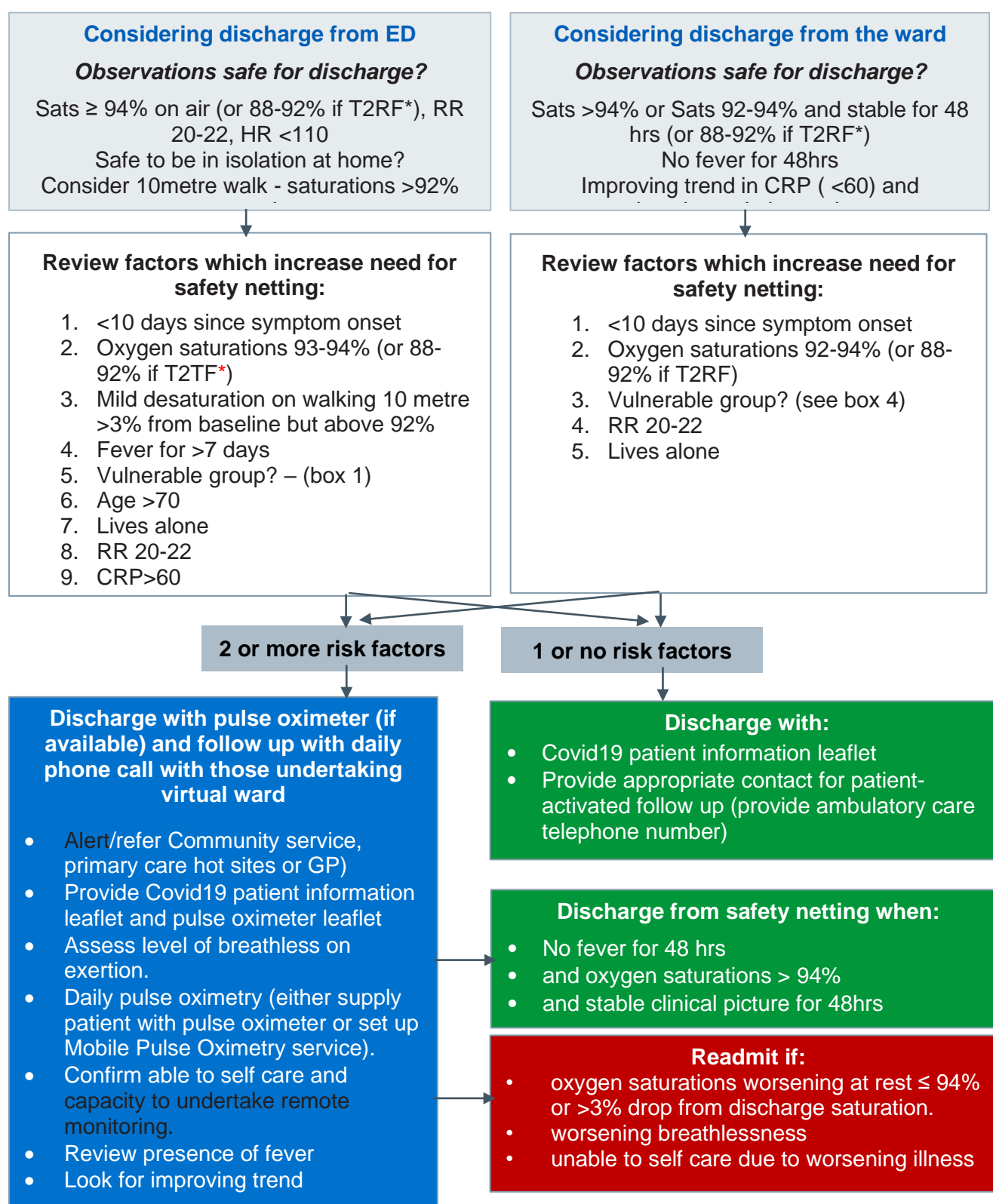
If patients require review post discharge from secondary care please follow PHE guidance regarding isolation of the patient.

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



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

2.6.1.1. Acute Clinical decision aid: Suitability for discharge and appropriate safety netting following ED attendance or hospital admission with confirmed/ suspected COVID-19 (use for patients who would be for readmission and full escalation of care)



*T2RF: Type 2 respiratory failure is typically seen in patients with severe COPD and is associated with hypercapnia on ABG ($p\text{CO}_2 > 6.1\text{kPa}$). In chronic T2RF there will be a raised serum HCO_3^- as part of metabolic compensation to maintain a normal serum pH. These patients are vulnerable to rising $p\text{CO}_2$ and respiratory acidosis if over oxygenated $>92\%$ hence target sats are 88-92% in this group.

Box 4. “Extremely Vulnerable Patient Group” relating to the Covid19 pandemic

<https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>

1. Solid organ transplant recipients.
2. People with specific cancers:
 - people with cancer who are undergoing active chemotherapy
 - people with lung cancer who are undergoing radical radiotherapy
 - people with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment
 - people having immunotherapy or other continuing antibody treatments for cancer
 - people having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors
 - people who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs
3. People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD.
4. People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell).
5. People on immunosuppression therapies sufficient to significantly increase risk of infection.
6. Women who are pregnant with significant heart disease, congenital or acquired.

2.6.1.2. Discharge to care/nursing home following COVID illness

Follow current NHS/PHE guidance:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874213/COVID-19_hospital_discharge_service_requirements.pdf

Stepdown of infection control precautions and discharging COVID-19 patients:

<https://www.gov.uk/government/publications/covid-19-guidance-for-stepdown-of-infection-control-precautions-within-hospitals-and-discharging-covid-19-patients-from-hospital-to-home-settings/guidance-for-stepdown-of-infection-control-precautions-and-discharging-covid-19-patients>

2.6.1.3. 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.



3. Guidance in the use of oxygen therapy in COVID-19 outside of hospital setting

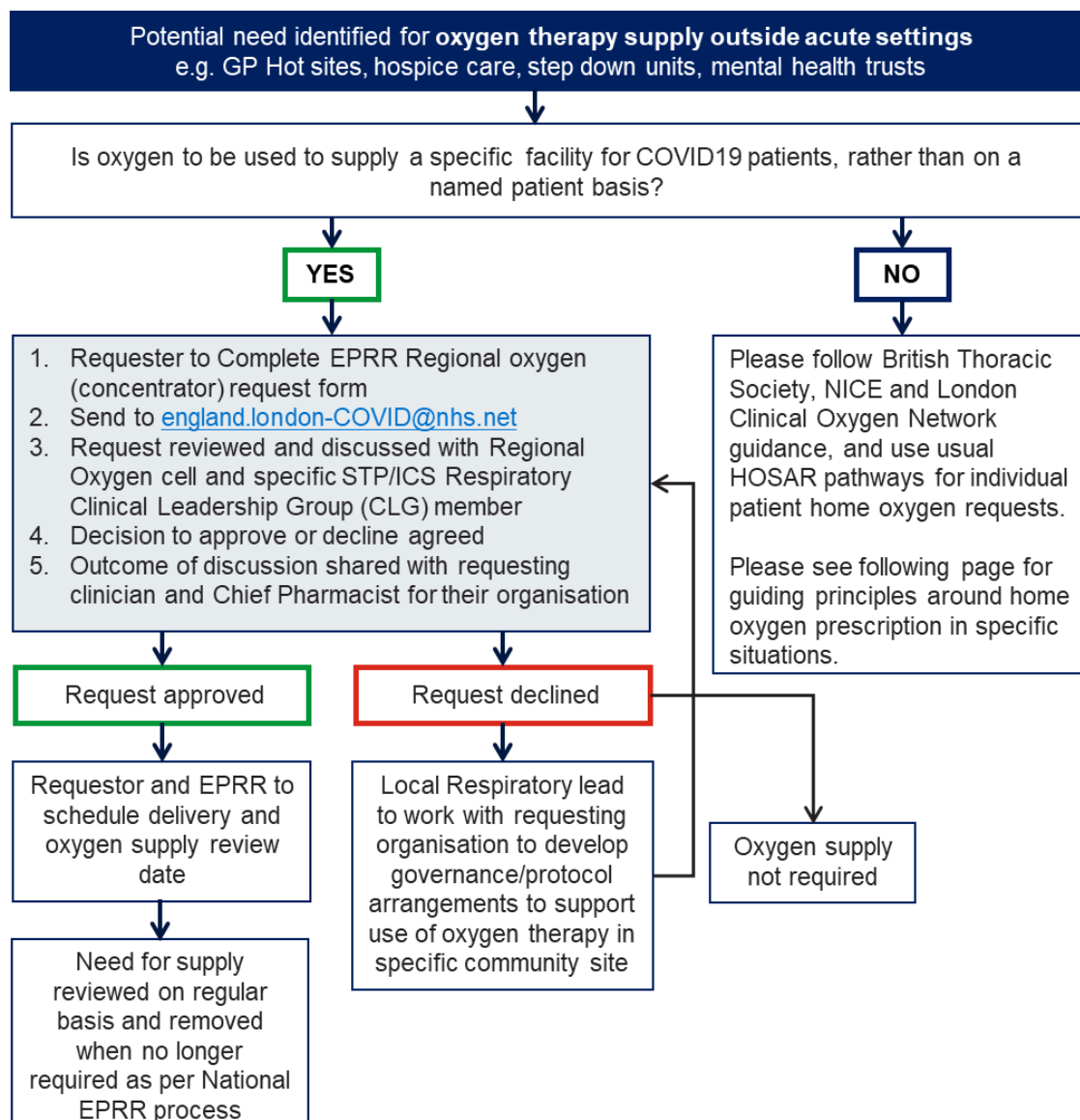
Before considering the use of oxygen therapy in out of hospital settings, healthcare professionals are asked to adhere to three key principles to ensure prescription and supply of oxygen is safe, effective and as evidence based as possible:

1. The local respiratory clinical lead, palliative care clinical lead and/or local Home Oxygen Assessment and Review Service (HOSAR) 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) 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 (<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0256-specialty-guide-oxygen-therapy-and-coronavirus-9-april-2020.pdf>)
 - 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.



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.



3.2 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.

3.2.1 Patients with suspected or confirmed COVID-19 assessed within primary care hot sites

This is defined as emergency oxygen and therefore falls under the remit of British Thoracic Society Emergency Oxygen guidance 2017.

<https://brit-thoracic.org.uk/quality-improvement/guidelines/emergency-oxygen>

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

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 $\geq 94\%$ on air (or 88-92% if at risk of type 2 respiratory failure) and be risk assessed and safety netted 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 $>92\%$ on air as part of an improving general clinical picture, and do not desaturate significantly on exertion. Therefore, provision of oxygen therapy (including ambulatory oxygen) outside the acute setting should not be considered in this group.

Inpatients who desaturate significantly on exertion should be investigated to identify and treat additional complications such as secondary infection or pulmonary embolism. 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.

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

Patients should be clinically stable, medically fit for transfer and have improved oxygen saturations to be eligible for safe step down from the acute setting and therefore provision of oxygen therapy should not generally be considered in this group. 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 of these patients.



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 (saturation <90% on air) and who does not wish to be treated in hospital, a senior decision maker such as a GP or palliative care physician may consider a trial of supported emergency home oxygen therapy. This can be arranged on 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.
- 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 (HOOFA) on the Air Liquide online portal <https://www.airliquidehomehealth.co.uk/hcp/HOOFA>. Before prescribing emergency oxygen and submitting the HOOFA, 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.

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 <https://www.airliquidehomehealth.co.uk/hcp/Content/HORM.pdf>. 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.

Home oxygen prescription 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
- 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 up
- ensure 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

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-and-managing-medicines-and-devices/about-this-guidance>

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



4. Palliative Care

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

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

For patients who have severe symptoms and are deteriorating rapidly, consider urgent 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.

4.2. 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.

4.2.1. Breathlessness (see NICE COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community NICE guideline [NG163] 3.4.2020)

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
- encouraging 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 (appendix 7).

4.3. Pharmacological control of symptoms

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

On 3.4.2020 NICE published COVID-19 rapid guideline: managing symptoms (including at the end of life) in the community NICE guideline [NG163] 3.4.2020)



The RCGP have a variety of resources including clinical guidelines for the community setting:

https://elearning.rcgp.org.uk/pluginfile.php/149342/mod_resource/content/1/COVID%20Community%20symptom%20control%20and%20end%20of%20life%20care%20for%20General%20Practice%20FINAL.PDF

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.

Consider the following symptoms and prescribe appropriate medications (adapted from Association for Palliative Medicine COVID-19 guidelines (22 March 2020 and NICE guidance 3 April and subsequent update 22 April 2020. For full list of special considerations including prescribing in renal impairment can be found in Hyperlink NG163

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 to 10mg PO 2 to 4hrly as required, or one twelfth of the 24hr dose for pain, whichever is greater
	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.



		<p>Can be increased by 0.5 mg to 1mg increments as required (maximum 10mg daily or 5mg in elderly)</p> <p>Can be given at the same dose subcutaneously or by 24 hour infusion such as 2.5mg to 10mg over 24 hours.</p> <p>Consider adding a benzodiazepine such as lorazepam or midazolam if the patient remains agitated.</p>
	Patients who are unable to swallow	<p>Levomepromazine 12.5mg to 25mg subcutaneously as a starting dose and then hourly as required (use 6.25mg to 12.5mg in the elderly).</p> <p>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)</p> <p>Consider use of Midazolam alone or in combination with levomepromazine if the patient also has anxiety (see dosages above).</p>
Cough	Patients who are able to swallow	<p>Initial management: use simple non-drug measures, for example A teaspoon of honey</p> <p>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</p> <p>If necessary increase dose to a maximum of 30-60mg 4 times a day (maximum 240mg in 24 hours)</p> <p>Second choice, only if cough is distressing: morphine sulfate oral solution (10 mg/5 ml)</p> <p>2.5 mg to 5 mg when required every 4 hours</p> <p>Increase up to 5 mg to 10 mg every 4 hours as required</p> <p>If the patient is already taking regular morphine increase the regular dose by a third</p>
Fever	N/A	<p>Paracetamol 500mg to 1g PO maximum 4g per day</p> <p>Ibuprofen 400 mg three times a day when required</p> <p>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.</p>

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



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

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

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. See further Special considerations NICE Guidance **NG163**

CCGs and their respective STP/ICS areas have been asked to established 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. Please see the guidance in Appendix 11 from the London Clinical Network for End of Life Care for further information on non-oral or -non-parental routes for administration.

<http://createsend.com/t/d-0BEB3346C320C62D2540EF23F30FEDED>

All bulletins care also be found here:

<https://www.england.nhs.uk/coronavirus/primary-care/other-resources/primary-care-bulletin/>

For the reuse of medicines, please refer to the following publication. It is suggested that local SOPs are developed:

<https://www.gov.uk/government/publications/coronavirus-covid-19-reuse-of-medicines-in-a-care-home-or-hospice>



5. Verification of Death and Care after Death

National guidance has now been published and should be followed.

<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>

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

6. Longer-term Respiratory follow-up management of those who have had suspected or confirmed COVID-19 infection

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

6.1. 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 2 - 4 weeks post COVID 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 SNOMED 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%

In addition, depending on demand and resources available, people could consider searching codes for Flu-like symptoms for a few weeks prior to the introduction of SNOMED codes

Using these codes, it has been found that on average there are approximately 10 (range 2-20) patients per 1000 list size. Therefore, for a list size of 5000, there may be 50-100 who have been coded as having COVID or COVID like symptoms.

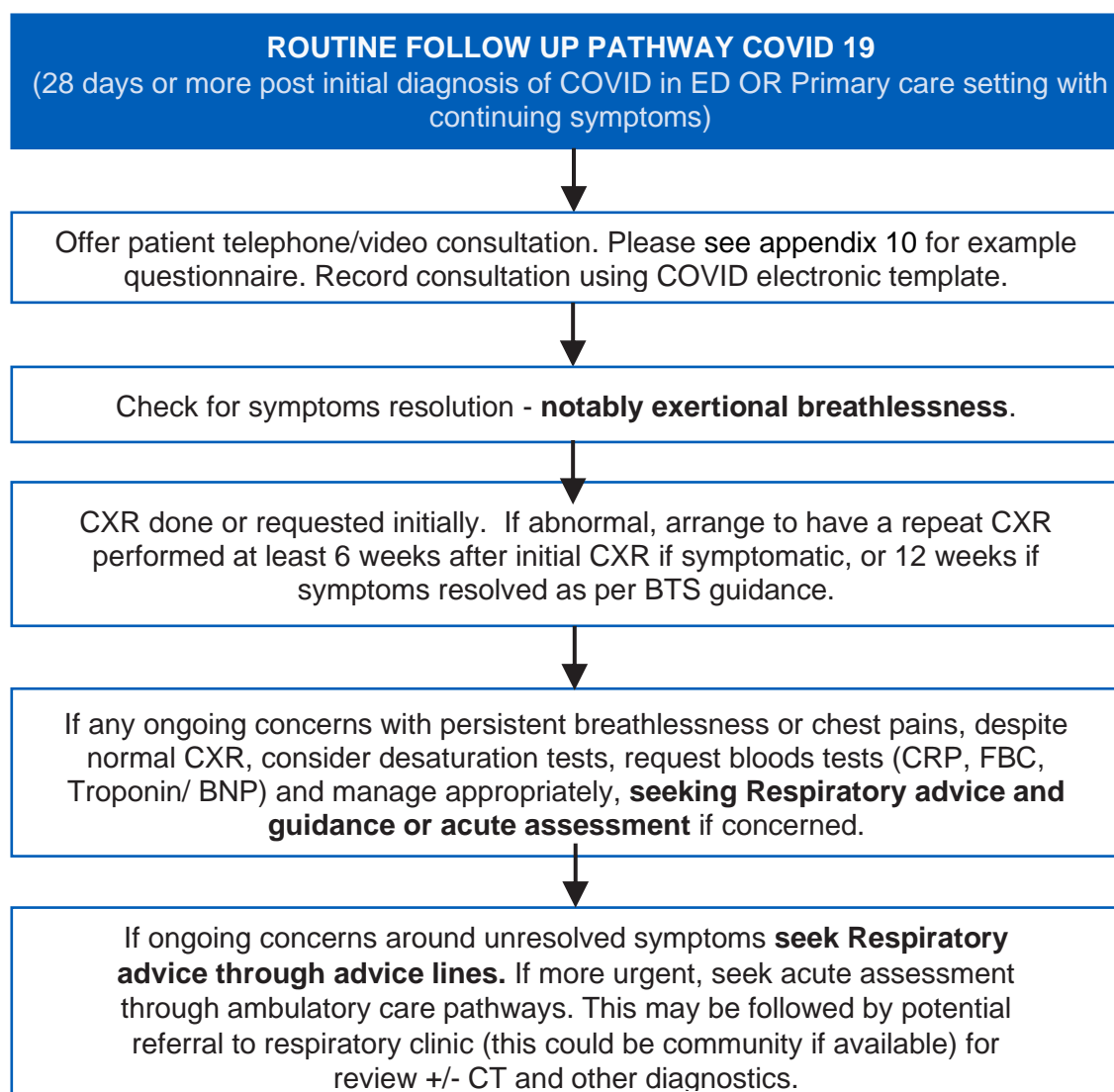
Some practices may opt to use text services to prompt those patients identified to contact the GP if they are still experiencing ongoing symptoms. Telephone assessments can be used to triage patients into cohorts for those who need active follow up or remote monitoring; those who need referral to post-COVID 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.



6.2. Emerging guidance for the clinical review of patients discharged from ED or primary care hot sites 28 days post suspected or confirmed COVID-19 pneumonia diagnosis

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 have yet to be followed up 28 days or more after the initial diagnosis.



6.3. 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. The London region will shortly be releasing a comprehensive multidisciplinary follow up and symptom management guidance document.

Symptom	Factors to consider in the history	Initial investigations to consider	Clinical decision-making
Breathlessness	<p><u>Nature of breathlessness:</u></p> <ul style="list-style-type: none"> At rest Exertional <p><u>Associated symptoms:</u></p> <ul style="list-style-type: none"> Cough Wheeze Chest pain <p><u>Risk factors:</u></p> <ul style="list-style-type: none"> PE: personal or family history of venous thromboembolism, malignancy, recent prolonged immobility, prothrombotic haematological conditions Cardiac disease: personal history of cardiovascular disease <p><u>Recent investigation results:</u></p> <ul style="list-style-type: none"> Chest x-rays, CT scans and blood tests from recent hospital attendance 	<ul style="list-style-type: none"> Oxygen saturation at rest and post-exertion Chest x-ray (if no improvement) 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) 	<p>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)</p> <p>If hypoxic at rest or desaturating post-exertion seek immediate advice from Respiratory or GP support lines or consider acute assessment</p> <ul style="list-style-type: none"> 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 <p><u>Other considerations:</u></p> <ol style="list-style-type: none"> If recent investigations and observations are normal and there is no clear cause for their symptoms, explore potential underlying anxiety If breathlessness continues post 4-6 weeks consider referral into local respiratory services (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.
Symptom	Factors to consider in the history	Initial investigations to consider	



<p>Pleuritic chest pain</p>	<p><u>Associated symptoms:</u></p> <ul style="list-style-type: none"> • Cough • Calf pain • Dyspnoea • Palpitations • Haemoptysis <p><u>Risk factors:</u></p> <ul style="list-style-type: none"> • PE: personal or family history of venous thromboembolism, malignancy, recent prolonged immobility, prothrombotic haematological conditions • Cardiac disease: personal history of cardiovascular disease <p><u>Recent investigation results:</u></p> <p>Chest x-rays, CT scans and blood tests from recent hospital attendance</p>	<ul style="list-style-type: none"> • 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 	<p>If hypoxic at rest or desaturating post-exertion seek immediate advice from Respiratory and/or ambulatory care services to consider acute assessment)</p> <p>Flitting chest pains 6-8 weeks post COVID are not unusual and do not signify PE in absence of other typical clinical features.</p> <p><u>If oxygen saturation normal:</u></p> <ol style="list-style-type: none"> 1) PLUS normal chest x-ray: <ol style="list-style-type: none"> i. Consider non-respiratory causes (e.g. infection or inflammation elsewhere). 2) PLUS chest x-ray abnormal/showing consolidation: <ol style="list-style-type: none"> i. Symptoms may be explained by pneumonia; <i>needs antibiotics</i> <p><u>ECG abnormalities:</u></p> <ol style="list-style-type: none"> 1) Check ECG to exclude ischaemic changes
<p>Cough</p>	<p><u>Nature of cough:</u></p> <ul style="list-style-type: none"> • Productive of purulent sputum • Dry <p><u>Red flags:</u></p> <ul style="list-style-type: none"> • Weight loss • Night sweats • Haemoptysis 	<ul style="list-style-type: none"> • Chest x-ray (if no improvement) • Sputum MCS 	<p><u>Productive cough:</u></p> <ol style="list-style-type: none"> i. Could represent secondary bacterial pneumonia 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) <p><u>Dry cough:</u></p> <ol style="list-style-type: none"> i. 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) iii. Consider measuring peak flow <p><u>Persistence of symptoms:</u> If no improvement after 6 weeks request an up-to-date chest x-ray to exclude other underlying pathology</p> <p><u>If any red flags:</u> Consider need for requesting cross-sectional imaging and referring on 2WW pathway</p>



Palpitations / tachycardia	<p><u>Associated symptoms / red flags:</u></p> <ul style="list-style-type: none"> Myocardial ischaemia (chest pain) Syncope/postural dizziness Heart failure (acute breathlessness) Shock (hypotension) <p><u>Risk factors:</u></p> <ul style="list-style-type: none"> Known cardiac conduction abnormalities Thyroid disease 	<ul style="list-style-type: none"> ECG Blood tests (including thyroid function) <p>Erect and supine BP</p>	<ol style="list-style-type: none"> Tachycardia may be driven by infection but need to consider possibility of arrhythmia If symptoms persist with no clear cause or if associated with red flags, refer for urgent ECG & medical/cardiology assessment to exclude underlying arrhythmia
Fever	<p><u>Screen for infective symptoms / signs:</u></p> <ul style="list-style-type: none"> Respiratory Urinary Gastroenterological Dermatological Neurological Rheumatological <p>Cardiac</p>	<ul style="list-style-type: none"> Bloods tests for inflammatory markers Cultures (sputum, urine, wound swab) <p>Chest X-ray</p>	<ol style="list-style-type: none"> 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 <p>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</p>
Hoarseness	<p><u>Associated symptoms / red flags:</u></p> <ul style="list-style-type: none"> Breathlessness Swallowing difficulties 	<ul style="list-style-type: none"> Cross-sectional imaging of neck +/- thorax 	<ol style="list-style-type: none"> Exclude oropharyngeal candidiasis (especially if immunosuppressed or on inhaled corticosteroids) If hoarseness is thought to be due to inhaled corticosteroids, advise use of a spacer and mouth rinsing (where relevant) <p>If no clear cause, liaise with ENT (may need to consider nasendoscopy or cross-sectional imaging if symptoms persist or other red flags)</p>
Anxiety and Depression	<p><u>Is being seen in both patients with severe and moderate COVID disease</u></p>	<ul style="list-style-type: none"> Screen with PHQ/GAD 	<ol style="list-style-type: none"> Reassure – likely to improve with time Refer to IAPT if service available Be aware of PTSD in ITU survivors – may need psychologist support
Fatigue	<p><u>Common feature post COVID</u></p>	<ul style="list-style-type: none"> Reassure 	<ol style="list-style-type: none"> Usually resolves with time Rest and convalescence Please see useful online resource for people recovering from COVID 19 with residual fatigue https://Covidpatientsupport.lthtr.nhs.uk



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

There are a number of 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 shielding for at least 12 weeks, see links. British Lung Foundation - <https://www.blf.org.uk/support-for-you/coronavirus/what-is-social-shielding> and Asthma UK - <https://www.asthma.org.uk/advice/triggers/coronavirus-covid-19/>
- 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
- Advise them to get a home thermometer and pulse oximeter if possible (or issue them if you have access to stock)
- Avoid use of prednisolone for AECOPD unless 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, services maybe supporting patients to exercise at home. Please refer patients as usual to your local PR service for support. Patients can also be directed to <https://www.blf.org.uk/support-for-you/coronavirus> for information on how to remain active.
- Tell patients established on ICS to continue to use them and delay any planned trials of withdrawal of ICS.

7.1 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). The PHE do not consider spirometry to be an AGP (ref) 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 (ref). 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.

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.

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:

- PEF <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.

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 twice-daily 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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9. 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 guide was produced for health care professionals working in hot sites with guidance on the use of emergency oxygen therapy to treat patients with hypoxaemia associated with suspected or confirmed COVID 19. It has been developed using the British Thoracic Society guidelines for Emergency Oxygen¹ and expert clinical consensus across London.

Indications for emergency oxygen therapy in patients without underlying lung disease

It is recommended that emergency oxygen must only be used to maintain target saturations in patients who have been assessed face to face and **are waiting for transfer to hospital**.

At the time of writing, specific clinical indications are:

- 1) Patients who are breathless and have oxygen saturations (presuming no underlying lung disease) **<94%**
- 2) Patients who are not breathless (silent hypoxaemia) and have oxygen saturations **<92%**

Signs of respiratory deterioration:

- ↑ Respiratory rate (especially if >25 per minute)
- ↓ Oxygen saturations by pulse oximetry
- ↑ Oxygen dose needed to maintain target sats (see algorithm below)

Signs of CO₂ retention are:

- Drowsiness
- Headache
- Flushed face
- Flapping Tremor

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

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 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

Emergency oxygen treatment algorithm

Patient identified as needing emergency oxygen (please see indications)

Simple face mask or nasal cannulae 2 l/min

Simple face mask or nasal cannulae 4 l/min

Simple face mask 8 l/min

* Change to Reservoir mask 15 l/min

Continue to give 15 L via Reservoir mask (unless pt at risk of CO₂ retention)

Training on set up: This guide does not replace the training provided by Air Liquide on delivery of site-specific oxygen supply.

It is recommended that each site nominate 1-2 oxygen leads to support safe and effective use within primary care sites.

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 may 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** 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

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 <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/emergency-oxygen/>

Appendix 2. Those considered to be at 'increased risk'.

- aged 70 or older (regardless of medical conditions)
- under 70 with an underlying health condition listed below (ie 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 your spleen – for example, [sickle cell](#) disease or if you have had your spleen removed
- a weakened immune system as the result of conditions such as [HIV and AIDS](#), or medicines such as [steroid tablets](#) or [chemotherapy](#)
- being seriously overweight (a body mass index (BMI) of 40 or above)
- those who are pregnant



Appendix 3. 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:

Ask the patient to describe the problem with their breathing in their own words, and assess the ease and comfort of their speech. Ask open-ended questions and listen to whether the patient can complete their sentences.

"How is your breathing today?"

Align with NHS111 symptom checker, which asks three questions (developed through user testing but not evaluated in formal research):

Are you so breathless that you are unable to speak more than a few words?"

Are you breathing harder or faster than usual when doing nothing at all?

"Are you so ill that you've stopped doing all of your usual daily activities?"

Focus on change. A clear story of deterioration is more important than whether the patient currently *feels* short of breath. Ask questions like

is your breathing faster, slower or the same as normal?"

"What could you do yesterday that you can't do today"

"What makes you breathless now that didn't make you breathless yesterday?"

Interpret the breathlessness in the context of the wider history and physical signs. For example, a new, audible wheeze and a verbal report of blueness of the lips in a breathless patient are concerning.




Appendix 4. Clinical Frailty Scale (Rockwood, 2005)

Version 1.1

Version: 1.1
22/04/2020

ROCKWOOD CLINICAL FRAILITY SCALE



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 ≥ 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*



1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.



2 Well – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.



3 Managing Well – People whose **medical problems are well controlled**, but are **not regularly active** beyond routine walking.



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 during the day.



5 Mildly Frail – These people often have **more evident slowing**, and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.



6 Moderately Frail – People need help with **all 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.



7 Severely Frail – Completely dependent for **personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).



8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9. Terminally Ill - Approaching the end of life. This category applies to people with a **life expectancy <6 months**, who are **not otherwise evidently frail**.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.

2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

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Your doctor has given you, or your carer, this diary and pulse 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, how 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.

A pulse oximeter helps you to monitor how fast your heart is beating and the level of oxygen in your blood. This blood oxygen level is the most accurate way of keeping an eye on 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.

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 oxygen level.



Write the information in the attached diary. Start writing on the line that 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.

- You are **unable to complete short sentences** at rest due to breathlessness
- **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.

If you 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 illness 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.

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

[illegible]

* 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 6. 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, will not do well with intubation and mechanical ventilation. Patients are likely to become hypoxic very quickly as they will not have much reserve. 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 7. 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 in order 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 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:
<https://www.england.nhs.uk/london/london-clinical-networks/our-networks/end-of-life-care/end-of-life-care-key-publications/>
3. GP practices can invite patients by text, e-mail or letter to start their own myCMC plan.
www.mycmc.online A template letter is available here:
<https://www.coordinatemycare.co.uk/wp-content/uploads/2020/03/my-cmc-letter-template-for-gps.docx>
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:
www.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 log-ins using the online portal:
<https://www.coordinatemycare.co.uk/joining-cmc/>
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 absolutely 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. **Using e-mail to share this list is NOT standard practice.** 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 Murrae.tolson@swlondon.nhs.uk 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 non clinical 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 in order 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.
<https://www.coordinatemycare.co.uk/joining-cmc/>. (Appendix 5.)
 Some Trusts have arranged CMC log-ins for ED administrators and FY1s and FY2s. E-mail the attached list to coordinatemycare@nhs.net by 9am Monday morning for log-ins 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 in order 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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Claire Clements	Information Governance SME Manager, NEL
Dr Lyndsey Williams	Dr Lyndsey Williams, Macmillan GP EOLC Brent CCG Clinical Director Brent CCG, Clinical Lead NHSE/I London Region EOLC Clinical Network
Michelle Scaife	Quality Improvement Lead – Older People's Care & Last Phase of Life; Strategy and Transformation Team NHS North West London Collaboration of Clinical Commissioning Groups



Appendix 8. Managing your breathlessness at home during the corona virus (COVID-19) outbreak leaflet

Managing breathlessness at home during the COVID-19 outbreak

Many pre-existing conditions, such as heart or lung diseases, cause breathlessness. Breathlessness can be very frightening and distressing, even in milder cases, and may be worsened by fears relating to the corona virus. During the current corona virus outbreak, you may have reduced access to your usual support networks. It is important that you continue the usual treatments for your underlying conditions (e.g. inhaler). It's okay to contact your usual health and social care team for support.

If you think you may have corona virus, please use the 111 online corona virus service to find out what to do (111.nhs.uk). If you are unable to use the online service, please phone 111.

The following steps may help you feel less breathless. You might find some of these steps more helpful than others. Try them out and use the ones that you find most helpful:

Finding a comfortable position can ease your breathlessness, try these:

Sit upright in a comfortable armchair with both arms supported on the chair arms or cushions. Let your shoulders drop and relax. Rest the soles of your feet on the floor.



Sit on a chair and let your body flop forwards. Rest both arms on a table or your knees to support you.



Lie on your side propped up with pillows under your upper body. Tuck the top pillow into your neck to support your head. Rest your top arm on a pillow placed in front of your chest and your top leg on another.



In your comfortable position, loosen your wrists, fingers and your jaw.

Abdominal and tummy breathing

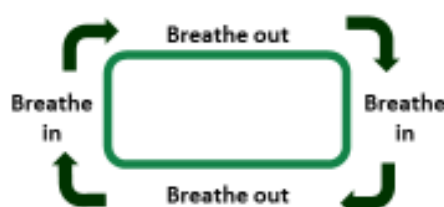
Rest a hand on your tummy and breathe in gently to feel your tummy rise. Then breathe out slowly through your nose or your mouth. Rest and wait for the next breath to come. You may find it helpful to purse your lips while you breathe out slowly as though you were making a candle flame flicker.

Slowing down

When you are comfortable with the tummy breathing, try to slow down the speed of your breathing. When you slow down, your breathing becomes deeper, which is more efficient. Imagine air filling your tummy like a balloon. Practicing regularly will make it easier to do when you are breathless.

Breathe a rectangle

- Once you have found a comfortable position, look around for a rectangle. This might be a window, a door, picture, or even a book or television screen.
- Now follow the sides of the rectangle with your eyes as you breathe, breathing in on the short sides and out on the long sides.
- Gradually slow the speed that your eyes move round the rectangle, pausing at the corners to help slow your breathing.



Cooling the face

Cooling the face, especially around the nose, can help reduce how breathless you feel. You can try wiping a cool wet flannel on your nose and upper cheeks of your face. The use of fans is not being recommended during the coronavirus outbreak due to the risk of it spreading infection.

Tips for living with breathlessness at home:



When walking

- Move at a comfortable pace, and breathe steadily
- Avoid holding your breath, or trying to move or turn too fast
- Pace your breathing to your steps; breathe in over one step, breathe out over the next two steps
- Use walking aids if they help you
- Stop and rest whenever you need to.

When climbing steps or stairs

- Use the handrail when climbing stairs and take the steps slowly. Try resting for at least five seconds every few steps.



During day to day activities

- Keep things you use often close to hand
- Have a charged phone close to your bed or armchair
- Plan ahead with your chores or daily activities, such as bathing or housework
- Spread your activity throughout the day
- Have everything you need before you start an activity
- Rest between activities or when your breathing begins to feel uncomfortable.



When feeling anxious

- Remember that this is a worrying time with a lot of uncertainty, so it is natural to feel worried
- There are many ways to deal with worried feelings. These include mindfulness, listening to relaxing music, or doing gentle activity such as gardening, yoga or singing.



When eating and drinking

- Take small meals often, rather than one large one
- Eat smaller mouthfuls
- Avoid foods that are difficult to chew, add sauces when possible
- Drink sips of fluid often to avoid becoming dehydrated.



Keep in touch

- Stay in touch with friends and relatives by using the phone and other technology and writing letters.



Keep active

- It is important to stay as active as you can, to prevent your muscles becoming weaker.

It's okay to ask for help.

Please continue to contact your usual health and social care teams if you need further support.

Further Resources for people with breathlessness:

- Cicely Saunders Institute: kcl.ac.uk/cicelysaunders/research/symptom/breathlessness
- St Christopher's Hospice: stchristophers.org.uk/videos/managing-breathlessness
- Hull York Medical School: breathlessness.hyms.ac.uk
- British Lung Foundation: blf.org.uk/support-for-you/breathlessness/how-to-manage-breathlessness
- Life of Breath Project: lifeofbreath.org/category/resources

References: Bausewein et al. 2008. Cochrane CD005623; Brighton et al. Thorax 2019;74:270-1.

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How to cite this resource: Higginson IJ, Maddocks M, Bayly J, Brighton LJ, Hutchinson A, Booth S, Ogden M, Farquhar M. on behalf of the NIHR Applied Research Collaborative Palliative and End of Life Care Theme. April 3rd 2020. Managing your breathlessness at home during the corona virus (COVID-19) outbreak.

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Appendix 9. 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 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 up 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,

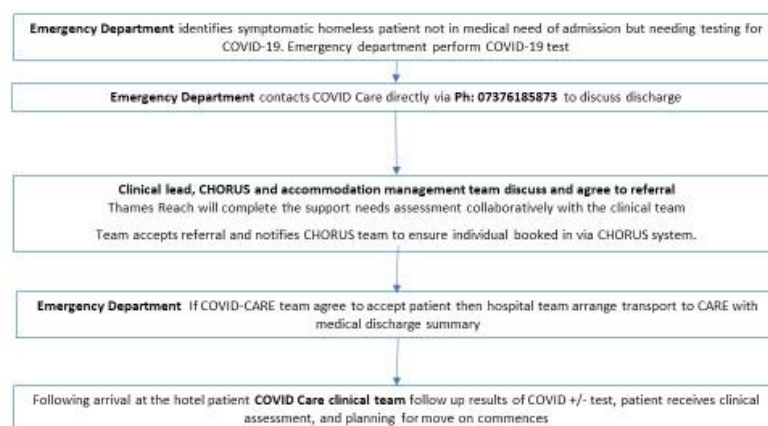
London COVID-10 Homeless Health Operations Team

NHS England and NHS Improvement

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



Emergency Department – Homeless patient not in medical need of admission



London COVID19 Homeless Health Operational Team (LCHOC) Team: For
Health referrals

CHORUS Team: COVID Homeless Health Rough Sleepers Team central team
managing allocations to GLA hotel sites

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 10. 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 has to 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 has to 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	
PHQ4	



Appendix 11. Guidance on symptom control using non-oral, non-parental routes of medication administration during COVID-19

Version: 1
Circulated date: 11/04/2020
Agreed date: 11/04/2020
Review date: 24/04/2020

Introduction

The Coronavirus pandemic and the national response to it, including the need for social distancing and the increased use of tele/video consultations by primary and community health and care staff, have resulted in changes to the provision of care in the community setting. These changes pose particular challenges to the administration of medication for symptom control for those with advanced life-threatening illness, including in the last days of life, and to those with COVID-19.

- Where possible, medication to manage common symptoms such as pain, breathlessness, nausea and vomiting and cough should be administered via the oral or subcutaneous route, and local Palliative Care / symptom control guidelines should be followed wherever possible. The recently published NICE COVID-19 rapid guideline: [managing symptoms \(including at the end of life\) in the community](#) provides guidance on the management of common symptoms via the oral and parenteral route in patients with COVID-19. Following this, the CQC and BMA have issued a [joint statement](#) on the use of medicines that are unlicensed or outside the terms of their existing license, that supports the use of these guidelines.
- When standard routes of administration are not possible, other routes may be required, and unpaid/unregistered carers may need to administer medications, with remote support / training from GPs / district nursing / specialist palliative care teams.
- Healthcare professionals involved in a patient's care continue to have responsibility for advising those important to the patient how to use the medications that they have recommended / prescribed. The HELIX Centre has developed [resources to support carer administration of subcutaneous medication](#).
- Local Medication and Administration records (MAAR) should continue to be used to record and administer such medication.
- It is also important to work with regional / local pharmacy partners to ensure that any medication prescribed is available.

In the pages that follow, the recommended medications for management of common symptoms via standard and alternative routes of administration are summarised. Of note, the order of the alternative medications listed in each table is not necessarily indicative of preferred order of use.

- [Pain](#)
- [Nausea and vomiting](#)
- [Anxiety, agitation and delirium](#)
- [Noisy respiratory secretions](#)
- [Breathlessness at end of life](#)
- [Cough](#)
- [Fever](#)



Pain

Treatment	Dosage				
Opioid	<p>Morphine sulphate 2.5 mg to 5 mg PO every 2 to 4-hours as needed.</p> <p>Morphine sulphate modified release 5 mg to 10 mg BD regularly and continue with immediate release morphine for breakthrough doses at 1/6th total daily opioid dose. Titrate as needed.</p> <p>If estimated glomerular filtration rate (eGFR) is less than 30 mL per minute, use equivalent doses of oxycodone instead of morphine sulphate (see Prescribing in palliative care in the BNF for more details)</p>				
Add parenteral morphine	<p>Morphine sulphate 2.5 mg to 5 mg subcutaneously every 2 to 4 hours as required.</p> <p>If more than 2 doses required consider morphine sulphate 10 mg as a continuous subcutaneous infusion via a syringe pump over 24 hours. Titrate as needed.</p> <p>If estimated glomerular filtration rate (eGFR) is less than 30 ml per minute, use equivalent doses of oxycodone instead of morphine sulphate (See BNF for more details on dosages and prescribing in palliative care)</p>				
Alternatives (if oral or subcutaneous route not available)	Buccal	Sublingual	Via PEG/RIG/NG tube	Transdermal**	Rectal
	X	<p>Concentrated oral morphine (Oramorph concentrated solution 20mg/1ml®). 2 mg to 5 mg (0.1 mL to 0.25 mL) SL every 4-hours as required.</p> <p>Concentrated Oxycodone (OxyNorm® Concentrate 10mg/ml oral solution®). 1 mg to 2 mg (0.1 mL to 0.2mL) SL every 4-hours as required (for use in renal impairment).</p> <p>Morphine sulphate injection 10 mg/ mL. 2.5 mg to 5 mg SL every 4-hours as required.</p> <p>Oxycodone injection 10 mg/ mL., 1.25 mg to 2.5 mg SL every 4-hours as required (for use in renal impairment).</p>	<p>MST Continus® Sachets 20mg/60mg/100mg BD</p> <p>Zomorph® capsules 10/30/60/100mg BD (can be opened and contents flushed down tube 8Fr or greater)</p>	<p>Buprenorphine 5/10/20 mcg/ hour patches – change every 7 days.</p> <p>Buprenorphine 35/52/70 mcg/ hour patches – change every 4 days.</p> <p>Fentanyl 12/25/37.5/50/75/100 mcg/ hour patches – change every 3 days</p> <p>**Cautions: See BNF or SPC for relative potency**</p> <p>ALL transdermal patches require time to reach steady state, not suitable for rapid titration or unstable pain**</p> <p>Caution in fever – can cause increased absorption**</p>	<p>MST Continus® tablets 5 mg PR TWICE daily (increased as necessary to maximum 30mg daily).</p>

Nausea and Vomiting

Treatment	Dosage			
Generalised nausea	Haloperidol 500 micrograms to 1 mg PO/SC every 4 to 6 hours as required. Or Metoclopramide 10 mg PO/SC every 6 to 8 hours as required. Or Cyclizine 50 mg PO/SC every 6 to 8 hours as required.			
Refractory nausea	Levomepromazine 6.25 mg PO/SC every 4 to 6 hours as required.			
Continuous subcutaneous infusion via syringe pump over 24 hours (if available)	Haloperidol 2.5 mg to 10 mg (5 mg in frail/elderly). Metoclopramide 30 mg. Cyclizine 150 mg. Levomepromazine 12.5 mg to 25 mg.			
Alternatives (if oral or subcutaneous routes not available)	Buccal	Sublingual	Orodispersible	Transdermal
	Prochlorperazine 3 mg buccal tablets. 1 to 2 tablets buccally up to twice daily as required.	Levomepromazine (Levinan®) 6 mg tablets. 3 mg (1/2 tablet) SL 4 to 6-hourly as required.	Olanzapine orodispersible tablets 5 mg. 2.5 mg to 5 mg (half to one tablet) once daily. (can be increased to twice daily if needed, max 10 mg/24 hours). Ondansetron orodispersible tablets 4 mg. One tablet every 6 to 8 hours as required (max 16 mg/24hours).	Hyoscine hydrobromide patch (Scopoderm®) 1 patch every 72 hours. Granisetron patch 3.1 mg/ 24 hours. One patch changed every 7 days. **Please note – not ideal given time for effect & lack of PRN option, should be used only when all other options have failed**

Anxiety, Agitation and Delirium

Treatment	Dosage				
Anxiety or agitation and able to swallow: lorazepam tablets	<p>Lorazepam 0.5 mg to 1 mg 4 times a day as required (maximum 4 mg in 24 hours)</p> <p>Reduce the dose to 0.25 mg to 0.5 mg in elderly or debilitated patients (maximum 2 mg in 24 hours)</p> <p>Oral tablets can be used sublingually (off-label use)</p>				
Anxiety or agitation and unable to swallow: midazolam injection	<p>Midazolam 2.5 mg to 5 mg subcutaneously every 2 to 4 hours as required</p> <p>If needed frequently (more than twice daily), a continuous subcutaneous infusion may be considered starting with midazolam 10 mg over 24 hours via a syringe pump (if available).</p> <p>Reduce dose to 5 mg over 24 hours if estimated glomerular filtration rate (eGFR) is less than 30 mL per minute</p>				
Delirium and able to swallow: haloperidol tablets	<p>Haloperidol 0.5 mg to 1 mg at night and every 2 hours when required. Increase dose in 0.5 mg to 1 mg increments as required (maximum 10 mg daily, or 5 mg daily in elderly patients).</p> <p>The same dose of haloperidol may be administered subcutaneously as required rather than orally, or a continuous subcutaneous infusion of 2.5 mg to 10 mg over 24 hours via a syringe pump.</p> <p>Consider a higher starting dose (1.5 mg to 3 mg) if the patient is severely distressed or causing immediate danger to others.</p> <p>Consider adding a benzodiazepine such as lorazepam or midazolam if the patient remains agitated (see dosages above).</p>				
Delirium and unable to swallow: levomepromazine injection	<p>Levomepromazine 12.5 mg to 25 mg stat and hourly as required (6.25 mg to 12.5 mg in the elderly).</p> <p>Maintain with a continuous subcutaneous infusion of 50 mg to 200 mg over 24 hours via a syringe pump.</p> <p>Consider midazolam alone or in combination with levomepromazine if the patient also has signs of anxiety (see dosages above).</p>				
Alternatives (if oral or subcutaneous routes not available)	Buccal	Sublingual	Orodispersible	PEG/RIG/NG Tube	Rectal
	<p>Buccal midazolam (Buccolam®) 2.5mg prefilled oral syringes. 2.5 mg 2-hourly as required.</p> <p>Midazolam 10 mg/ 2mL injection. 2.5 mg buccally 2-hourly as required.</p>	<p>Levomepromazine 6 mg tablets (Levinan®). 3 mg to 6 mg SL 4 to 6-hourly as required.</p> <p>Levomepromazine 25mg tablets. 6.25 mg SL 4 to 6 hourly as needed.</p> <p>Levomepromazine 25 mg/ mL injection 12.5 mg to 25 mg SL 4 to 6-hourly as required.</p>	<p>Olanzapine orodispersible tablets 5 mg. 2.5 mg to 5 mg (1/2 to one tablet) ON (can be increased to BD if required, max 10 mg/ 24 hours).</p> <p>Risperidone orodispersible tablet 0.5 mg OD (can be increased to BD if required).</p>	<p>Clonazepam liquid (500micrograms/5 mL or 2mg/5 mL) 500 micrograms to 1mg every 6 hours as required.</p> <p>Levomepromazine 25mg tablets (crushed and dispursed in 10 mLs water). 6.25mg every 4 to 6 hours as required.</p> <p>Levomepromazine injection 25mg/mL 12.5 mg to 25 mg SL 4 to 6-hourly as required.</p>	<p>Diazepam enema (2.5 mg or 5 mg). 2.5 mg to 5 mg PR 4 to 6-hourly as required.</p>

Noisy Respiratory Secretions

Treatment	Dosage				
By subcutaneous injection	Hyoscine butylbromide 20 mg every 4 to 6-hours as required Or Glycopyrronium 200 micrograms every 4 to 6-hours as required.				
Continuous subcutaneous infusion via syringe pump over 24 hours (if available)	Hyoscine butylbromide 60 mg to 120 mg Or Glycopyrronium 600 micrograms to 1.2 mg				
Alternatives (if subcutaneous route not available)	Buccal	Sublingual	Orodispersible	Transdermal	Via PEG/RIG/NG tube
	Hyoscine Hydrobromide 300 microgram tablets (Kwells®) 300 micrograms buccally every 6 to 8 hours as required.	Hyoscine Hydrobromide 300 microgram tablets (Kwells®) 300 micrograms SL every 6 to 8 hours as required. Atropine 1% eye drops. 2 to 4 drops SL every 4 hours as required. Glycopyrronium injection. 100 micrograms to 200 micrograms SL every 6 hours as required.	X	Hyoscine hydrobromide patch (Scopoderm®) 1 patch every 72 hours. Patches can be cut into ¼ or ½ if dose reduction needed.	Glycopyrronium oral solution 1 mg/ 5 mL. 200 micrograms every 8 hours as required. Glycopyrronium injection 200micrograms/mL. 200micrograms every 8 hours as required.

Breathlessness at End of Life

Clinical Networks

Treatment		Dosage				
Opioid naïve (not currently taking opioids) and able to swallow		Morphine sulphate immediate-release 2.5 mg to 5 mg every 2 to 4 hours as required or or morphine sulphate modified-release 5 mg twice a day, increased as necessary (maximum 30 mg daily).				
Already taking regular opioids for other reasons (for example, pain relief) and able to swallow		Morphine sulphate immediate-release 5 mg to 10 mg every 2 to 4 hours as required or one twelfth of the 24-hour opioid (morphine equivalent) dose for pain, whichever is greater.				
Opioid if unable to swallow		Morphine sulphate 10 mg over 24 hours as a continuous subcutaneous infusion via a syringe pump, increasing stepwise to morphine sulphate 30 mg over 24 hours as required. If already taking opioids contact specialist palliative care team for advice.				
Benzodiazepine if required in addition to 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 sulphate 2.5 mg to 5 mg subcutaneously up to every 1 hour as required Midazolam 2.5 mg subcutaneously up to every 1 hour as required. (See BNF for more details on dosages).				
Alternatives (if oral or subcutaneous routes not available)	Buccal	Sublingual	Via PEG/RIG/NG tube	Trans-dermal	Rectal	
	Buccal midazolam (Buccolam®) 2.5 mg prefilled oral syringes. 2.5 mg 2-hourly as required. Midazolam 10 mg/ 2 mL injection. 2.5 mg 2-hourly as required.	Lorazepam 1 mg tablets. 0.5 mg SL up to four times daily as required. Concentrated oral morphine (Oramorph concentrated solution 20 mg/ 1 mL®). 2 mg to 5 mg (0.1 mL to 0. 25 mL) SL every 4-hours as required. Concentrated Oxycodone (OxyNorm Concentrate 10 mg/ mL oral solution). 1 mg to 2 mg (0.1 mL to 0.2 mL) SL every 4-hours as required (for use in renal impairment). Morphine sulphate injection 10 mg/ mL. 2.5 mg to 5 mg SL every 4-hours as required. Oxycodone injection, 10 mg/ mL, 1.25mg to 2.5 mg SL every 4-hours as required (for use in renal impairment).	Morphine sulphate liquid 2.5 mg to 10 mg every 2 to 4 hours as required.	X	MST Continus® tablets 5 mg PR TWICE daily (increased as necessary to maximum 30 mg daily)	

Cough

Treatment	Dosage				
Initial management: use simple non-drug measures, for example taking honey	A teaspoon of honey.				
First choice, only if cough is distressing: codeine linctus (15 mg/ 5 mL) or codeine phosphate tablets (30 mg)	15 mg to 30 mg every 4-hours as required, up to 4 doses in 24 hours. If necessary, increase dose to a maximum of 30 mg to 60 mg 4 times a day (maximum 240 mg in 24 hours).				
Second choice, only if cough is distressing: morphine sulphate oral solution (10 mg/ 5 mL)	2.5 mg to 5 mg as 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.				
Alternatives (if oral route not available)	Buccal	Sublingual	Orodispersible	Transdermal	Rectal
	x	Concentrated oral morphine (Oramorph concentrated solution 20mg/ 1mL [®]) 2 mg to 5mg (0.1 mL to 0.25 mL) every 4-hours as required.	x	x	x

Fever

Treatment	Dosage				
Adults (18 years and over) and able to swallow	Paracetamol 0.5 g to 1 g every 4 to 6 hours as required, maximum 4 g per day.				
Alternatives (if oral route not available)	Buccal	Sublingual	Orodispersible	Transdermal	Rectal
			Calpol six plus® fastmelts (250 mg) 2 to 4 tablets every 4 to 6 hours as required.		Paracetamol suppositories 500 mg or 1g PR every 4 to 6-hours as required. Diclofenac suppositories 50 mg PR TDS (see MHRA guidance of use of NSAID in COVID-19 – considered appropriate if patient is dying).