

Covid oximetry@home Service; PCN/Practice Information Pack

- **Why is this service being introduced?**

As treatment of COVID improves, earlier detection of hypoxia at home could help further reduce mortality and morbidity. Patients most at risk of poor outcomes are best identified by assessing their oxygen levels. NHS England have made more pulse oximeters available for use in primary care so that people who are at risk of deterioration can be identified and kept safely at home if appropriate.

- **Who is this service recommended for?**

The service is aimed at people who are;

- diagnosed with Covid-19 (either clinically or positive test result **AND**
- are symptomatic
- **AND EITHER** 65 years or older OR Clinically Extremely Vulnerable (the Shielded group)

The use of oximetry to monitor and identify 'silent hypoxia' and rapid patient deterioration at home is recommended for people aged 18 or over in this group.

- **What is the model?**

Patients are offered an NHS oximeter for their own self-monitoring, three times a day, for up to a fortnight. Throughout the period the patient completes a diary of readings and they are asked to take specific action based on the readings.

- **What is in this Pack?**

This pack provides information to support practices in providing the oximetry@home service. It should be read alongside the [general practice](#) standard operating procedure.

This pack contains the following information:

Oximetry@home flowchart

- Annex 1:** Adapted NHS England Adult Primary Care Covid-19 Assessment Pathway
- Annex 2:** Patient assessment and support arrangements (see below)
- Annex 3:** Patient information and diary
- Annex 4:** GP FAQs (including supply, distribution and decontamination)
- Annex 5:** Patients who have chronic hypoxia; support information for GPs
- Annex 6** Requirements for data collection and evaluation.

Patient Assessment and Support Arrangements – Details in Annex 2

Local Arrangements

Arrangements for patient assessment and support are different across the CCG

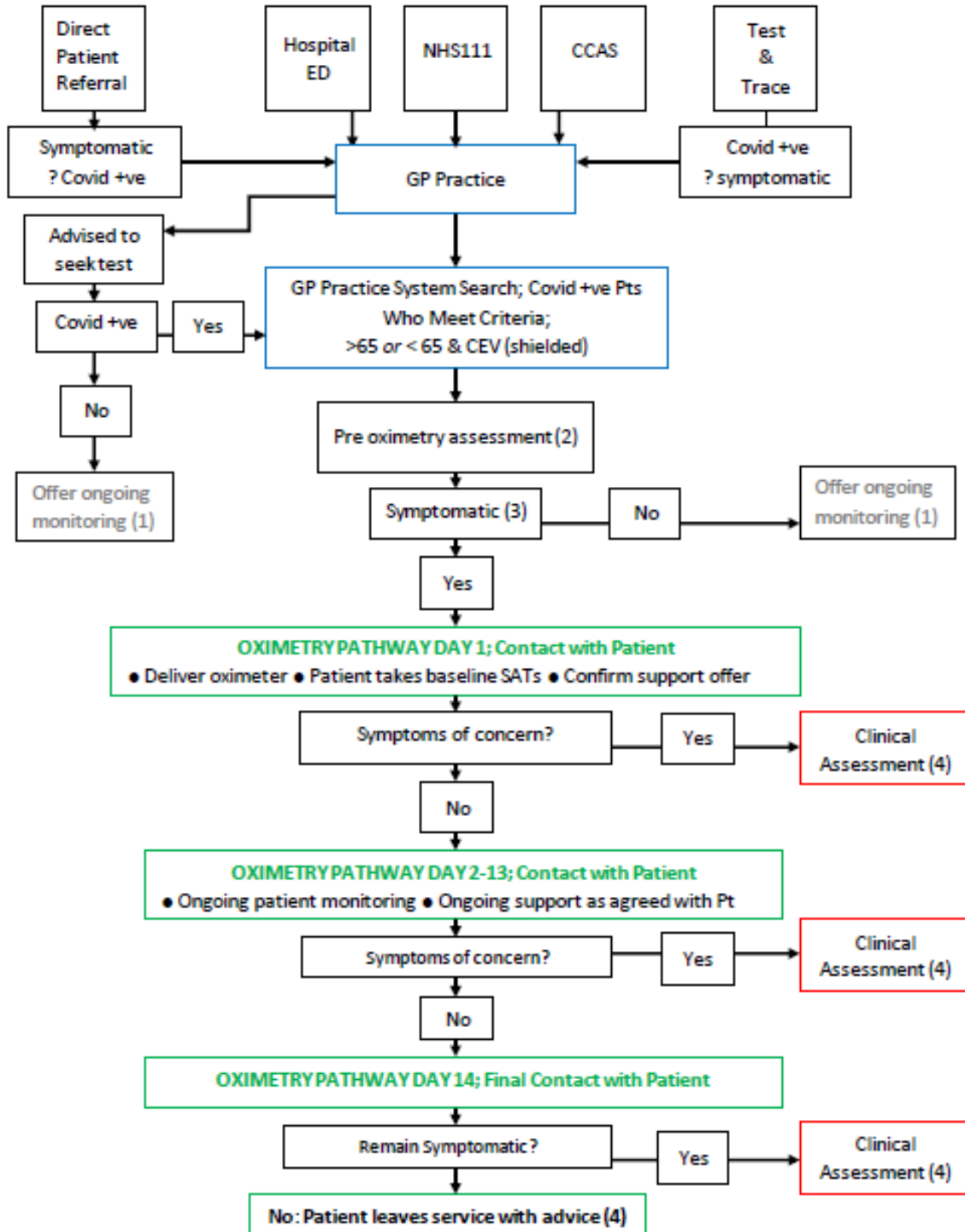
- Practices will provide this for patients themselves **OR**
The York Covid Support Hub-SPA will continue to provide this for patients on behalf of practices in York.

Out of Hours

There are specific arrangements in place for patients out of hours.

OXIMETRY@HOME FLOW CHART

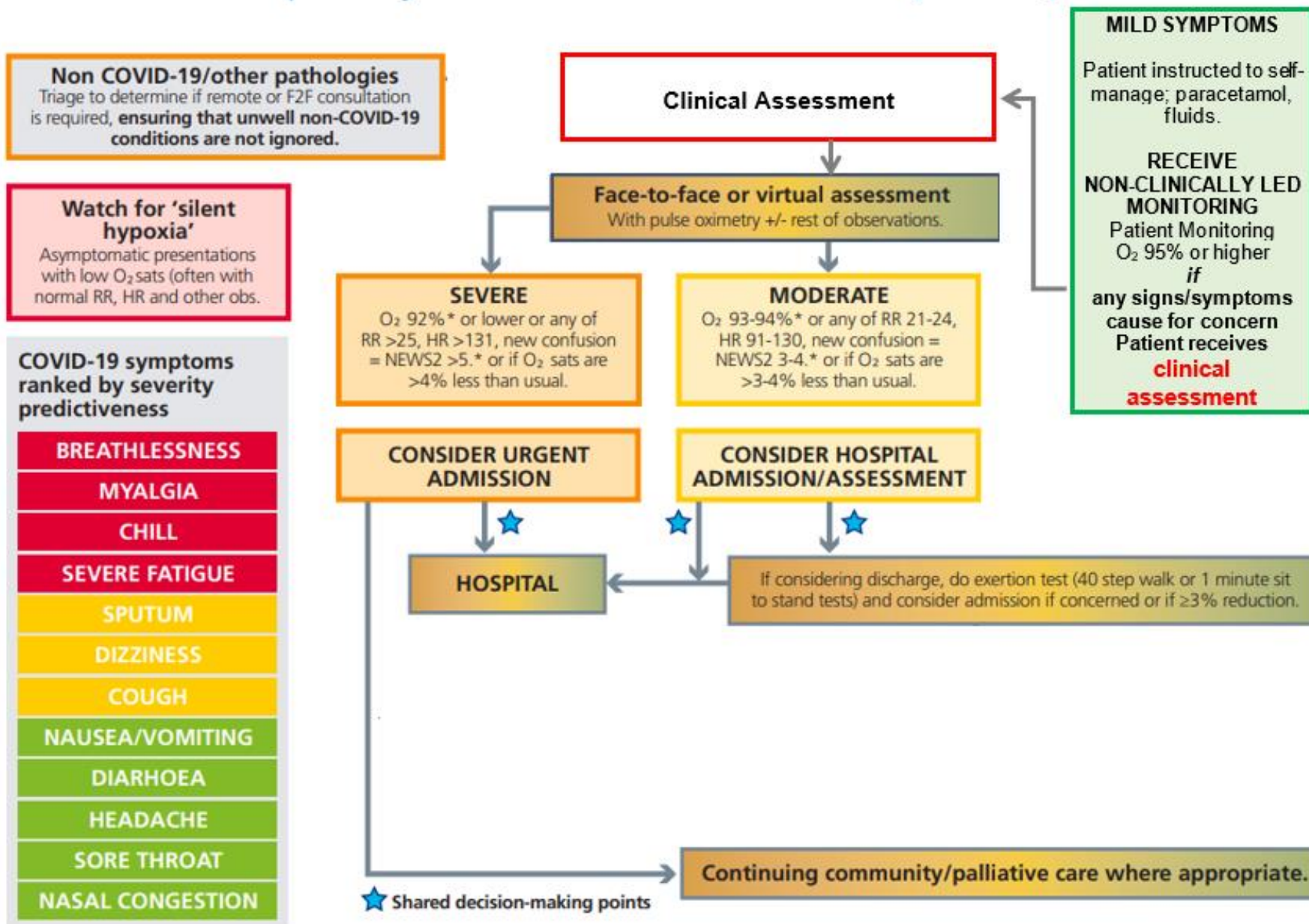
ADULTS WITH NORMAL LUNG FUNCTION



Note:

- (1) At discretion of PCN/Hub/Practice; does not include oximetry (modelling of supply allows for Covid +ve Pts only)
- (2) Contact by Practice or for City of York practices by York Covid Support Hub-SPA (2a) frequency and mode of prompt/support to be agreed with patient and Practice or York Covid Hub-SPA.
- (3) Step needed to differentiate between symptomatic and asymptomatic people ref from Test & Trace
- (4) Face to Face or Virtual Clinical Assessment; See Clinical Flowchart Annex 1
- (5) Advice on • rehabilitation e.g. Your Covid Recovery, • offer of Social Prescribing link worker referral, Health Trainer

Annex 1: Adult primary care COVID-19 assessment pathway⁷



NOTE; this has been adapted from Annexe 1 in the [NHS England Guidance on the Use of Pulse Oximetry](#) first published in June 2020

Annex 2: Patient Assessment and Support Arrangements

Part 1; Local Arrangements

- This pack provides support information for practices setting up pulse oximetry@home for their patients.
- The York Covid Hub-SPA managed by Nimbus Care has adapted its service to provide the oximetry@home service for **practices within the City of York**.

The York Covid Support Hub-SPA; Practices in the City of York

The York Covid Hub-SPA provides the following;

- Contact calls with the patient, at points in the process identified at (2) in the flow diagram above
- A collection/decontamination/distribution Hub; the mass vaccination site at Askham Bar.
- Coordination of delivery/collection of the oximeter from the Hub by a volunteer from the national Volunteer Programme “GoodSam” if the patient is unable to arrange collection/return of the oximeter by a friend or family member.
- Decontamination of the oximeter
- Provision of;
 - a) patient information, including; the patient diary, safety netting instructions
 - b) discharge information; including information on rehabilitation.

Part 2; Out of Hours

Information provided by Vocare

Vocare - Despatch line number is **0300 123 2937**

This is the number that patient will ring for advice. This line will be active and open during the OOH period from 18.00 – 08.00 Monday to Thursday and Friday 18.00 - 08.00 Monday morning and full cover bank holidays.

Calls will be placed into our triage queue for a one-hour call back. Worsening advice will be given by the dispatcher on receipt of the call.

If a Special Patient note can be added to the Adastra portal this will be beneficial to aid with patient calls. Any patient who rings this line for any other medical query will be referred to NHS 111.

Annex 3; Patient information and diary

The patient needs to be provided with a patient information leaflet and diary. NHS England have provided a [Patient Information Leaflet and Diary](#) for this purpose. There are also [translated versions](#)

Please note; these do not contain the local information nor are they “easy read”.

Easy Read Patient Information and Diary

The attached template was designed with patients for improved readability and understanding¹



oximetry@home
Patient Diary Easy Rea

Please note;

It is the responsibility of the Practice/Covid Support Hub-SPA to ensure that the escalation instructions are accurate and to include locally specific information for the patient.

Supplementary information/advice for Patients

The following text on council support that is available can be included in the patient information/advice leaflet.

If you are struggling to manage, or you don't have any support, but need it because of Covid-19, you can get help from your local council. **Select the text that is relevant to your patients**

To contact **North Yorkshire County Council** on this [website link](#) or you can call NYCC Customer Services Centre on 01609 780780 (open 7 days a week from 8am to 5.30pm)

To contact **City of York Council** at this [website link](#) by email; covid19help@york.gov.uk or call; 01904 551550.

To contact **East Riding** community hub [website link](#), call 01482 393919 (open: Monday to Friday 9am to 5pm).

Videos on using pulse oximetry are available here:

English	https://www.youtube.com/watch?app=desktop&v=nx27Ck7xOgo
Polish	https://www.youtube.com/watch?v=Lkd-BNeMvLs
Hindi	https://www.youtube.com/watch?v=e1ipiJY-zwk
Punjabi	https://www.youtube.com/watch?v=wU5V6wVEHoM
Somali	https://youtu.be/qF7OuGuxqjA
Urdu	https://www.youtube.com/watch?v=rkGRRLLumW4
Tamil	https://youtu.be/LA7dVHwwz2k
Bangladeshi	https://youtu.be/Z_y7WhKi6ZE

¹ Provided by the Yorkshire and Humber Improvement Academy amended to match NHS England updated version (updated November 2020)

Annex 4: Frequently Asked Questions

The following information may be useful for practices and the York Covid Support Hub-SPA. It covers the following;

- Eligibility.
 - Patient assessment
 - Collection of pulse oximeters
 - Putting patients on oximetry@home monitoring
 - Monitoring
 - End of monitoring with the oximeter
 - Demand and supply of oximeters
 - Data collection
 - Recovery and discharge
-

Eligibility

Which patients should be included for oximetry@home?

Inclusion criteria are patients:

- i. Diagnosed with COVID-19: either clinically or positive test result **AND**
- ii. Symptomatic **AND EITHER**
- iii. *Aged 65 years or older OR*
- iv. *Under 65 years and clinically extremely vulnerable to COVID.* (The Clinically Extremely Vulnerable to COVID list should be used as the primary guide. Clinical judgement can apply and take into account multiple additional COVID risk factors; for the most part, it is anticipated that this will already have led to inclusion on the CEV list. National criteria for inclusion on the CEV list are set and updated by the Government.)

Are there any exceptions?

- This service is for people aged 18 years or over. **Children and young people** are excluded.
- The information contained in this pack is for the pathway for patients with normal lung function.
- Patients with **chronic hypoxia** are excluded from this pathway, however there is specific guidance for these patients (see [Annex 5](#))

This service is for patients who meet the criteria above. If there are local support services available for **patients who do not meet the criteria**, then this is a local option for the practice/Hub (see [Flow Chart p2](#))

Why is there a “pre-assessment” stage to the pathway?

Patients referred by hospital ED, CCAS or NHS111 will have a clinical/clinically supervised assessment which will determine whether their symptoms are consistent with a Covid diagnosis before referral into the service and will therefore meet the national guidance criteria.

Covid +ve people referred by Test and Trace may or may not be symptomatic, as the system does not make this distinction. Including this step makes sure that only patients who meet the criteria are included.

It is important to include this group, as there is evidence that some patients have mild illness for a week and then deteriorate clinically in the second week and that these patients benefit from “safety netting”. The oximetry@home pathway is aimed detecting deterioration and (silent) hypoxia and preventing these patients coming to harm.

What about patients who are discharged from hospital who are Covid positive and not 14 days post start of symptoms?

Patients will be identified from the system search (see [Flow Chart p2](#))

What about patients who are in Care Homes?

There are separate arrangements for oximetry in Care Homes. They have been provided with oximeters and residents care is coordinated through the Enhanced Health Care Homes arrangements.

Who is responsible for the care and treatment of patients offered this service?

The patient’s clinician and practice are responsible for the clinical governance of this pathway; including patient selection, “onboarding”, safety-netting, monitoring, and discharge from the pathway, as well as the training and supervision of any non-clinical staff who have been given the responsibility for patient monitoring/calls.

Patient Assessment

The flowchart shows the process for the use of pulse oximeters for remote monitoring of patients who are symptomatic with Covid. If patients then meet the criteria for monitoring and are suitable, they can receive home monitoring. If they do not meet the criteria or are not suitable, they should be asked to return the pulse oximeter.

Collection of pulse oximeters

Getting a pulse oximeter to a patient for remote assessment

Ideally ask the patient to send a friend or family member to pick up the oximeter in person from the **collection hub/practice** and ask the patient to take the test at home.

Note; this will need to be consistent with the information provided to the patient in the patient information leaflet.

If the patient is unable to arrange collection themselves, collection can be arranged through the NHS Volunteer programme. Referrals for support can be made via the NHS Volunteer Responders portal:

- Visit www.goodsamapp.org/NHSreferral
- Select 'NHS Transport Support'.
- Transport can usually be arranged within 1.5 to 2 hours.

Note; You may prefer to use local arrangements for volunteer collection if these are available.

Can Hot sites give out pulse oximeters for monitoring?

Yes. If patients meet the criteria, pulse oximeters with self-monitoring diaries can be given by hot sites. If patients are referred to the hot site for assessment, and are not seen face to face, they will be referred to the practice if pulse oximetry@home is considered an option.

Note; Collection and return to the practice/hub will be as decided locally.

What needs to go into the bags for patients?

Patients should be provided with;

- patient information leaflet (see Annex 3)
- patient diary (see Annex 3)
- pulse oximeter
- zip bag (to return the pulse oximeter)

Putting patients on oximetry@home monitoring

What should be on the initial checklist when entering someone on the oximetry@home pathway? ²

Checklist for Contact with the Patient on the oximetry@home pathway

- Check the patient has access to the patient information leaflet
- Check that the patient is able to use the pulse oximetry correctly. The information is in the patient leaflet, and there is a link to an NHS animation which explains it too.
- Check that the patient understands what to do with the different sats readings:

95%+	continue to monitor three times a day
93-94%	check again over the next hour making sure that hands are warm, and the probe is place correctly. If persistently within the amber range – to call GP or Out of Hours; Vocare Despatch line number; 0300 123 2937
<=92%	check again and if persistently 92% or less to call 999 or go to the nearest A+E

- Check that the patient understands the red flag symptoms to look out for (these are in the patient information)
- Check that the patient understands how to record the sats in the diary
- Work out which day the patient is currently on (day 1 = first day of symptoms) and the patients marks it in the diary
- If using check in calls – arrange which days calls will be made and which number to call (usually days 2, 5, 7, 10 and 12)
- If using AccuRx – set up reminders and explain what to do
- Advise to return the pulse oximeter after day 14 by putting the pulse oximeter in the bag provided, sealing it and dropping it off at the collection hub/practice (or arranging a volunteer to pick up – details in the patient information)

Monitoring

What type of monitoring is available?

There are three types of monitoring. These are not all mutually exclusive:

1. Self-management using patient information and diary alone (the patient may be confident using the diary and may decline patent contact calls).
2. Self-management with patient information, diary and check-in telephone calls; Some patients may cope with the information leaflet and diary alone. However, some who are less likely to be able to self-manage, may benefit from telephone reminders checks – to check that they are doing the monitoring right, and need more reassurance
3. Self-management with more intense clinical monitoring using either app-based reminders (AccuRx) or usual follow up through booked clinical review. Other apps are available through Ardens and My mhealth which some practices may have access to.

² Taken from NYCCG Information Pack

When should check in calls be made?

This is a decision for the patient and the hub/practice; the national guidance is that prompts/calls are on days 2, 5, 7, 10 and 12.

Note; it is understood that patients may have relatively mild symptoms in week one, but may deteriorate in week two, therefore you may wish to consider this when deciding the frequency of calls in discussion with the patient.

What is the suggested content of the check-in calls?³

- Remind the patient that you are calling because they are on the oximetry@home pathway and what days reminder calls are planned
- Check what day it is now since symptoms started (day 1 = first day of symptoms)
- Ask how they are feeling.
- If patients need help (e.g. shopping) due to self-isolation, they can contact their council who can help.
- Ask whether their breathing is the same, better or worse; if worse ask them to perform the pulse oximetry whilst on the phone.
- If readings are persistently 93-94% then advise that you will ask a clinician to call back
- If readings are 95% or better, check that they are happy taking the readings and understand the leaflet and know to:
 - call GP or Out of Hours Vocare: **0300 123 2937** if readings are persistently 93-94% (i.e. over an hour), or have symptoms in the amber box on the patient leaflet
 - call 999 or go to A&E if readings are 92% or less (having rechecked again), or have symptoms in the red box in the patient leaflet
- Arrange when the next call will be
- If nearing 14 days from start of symptoms, advise to return the pulse oximeter to the practice in the bag (sealed) after day 14.

What if a patient calls with sats of 93-94%?³

These patients will need to be **clinically assessed** in line with the national pathway (see [Annex 1](#)).

If a patient calls with sats of 93-94%

- Check that the patient is using the pulse oximeter and interpreting the reading correctly
- Once this has been checked, **if the sats are 93-94%**
- Notify the GP who will contact the patient.**

Clinical assessment

- Check for other symptoms and signs which may need escalation/further assessment
- If after clinical assessment you are happy for the patient to continue monitoring at home, ensure the patient understands the red flags and when to seek further help.
- The York respiratory consultant advice is that if GPs feel that their patient needs further clinical assessment (e.g. bloods/CXR) they should discuss with the on call Covid Consultant who will admit to the Covid SDEC rather than admitting to A+E**

³ Taken from NYCCG Information Pack

Can the AccuRx COVID-19 remote monitoring Florey?

Yes. You can monitor a patient with suspected/confirmed COVID-19 with the remote monitoring Florey. You'll be able to send this to patients via text message and schedule these to be automatically delivered over multiple days. Patients complete the questionnaire and are given the following advice on completion:

Thank you for completing your COVID-19 health survey.

Your answers should be reviewed today (if you have responded within your practice's usual working hours). Please seek urgent medical attention if your symptoms worsen (e.g. call 111 if your practice is closed).

Please seek urgent medical attention if you develop any of the following:

- *Severe shortness of breath at rest*
- *Significant difficulty breathing*
- *Pain or pressure in the chest*
- *Cold, clammy or pale and mottled skin*
- *New confusion*
- *Feeling unusually sleepy*
- *Blue lips or face*
- *Passing only small amounts of urine*

After Completion SMS: Thank you for completing your GP's questions. Your answers should be reviewed today (if you have responded within your practice's usual working hours).

Please note that it does NOT inform patients what to do with specific O2 sats, so if using this Florey practices will either need a process to monitor incoming messages (taking into account weekends) and respond to patients in a timely manner, or ensure that patients are counselled and given advice on what to do with abnormal O2 sats. For more information see <https://support accurx.com/en/articles/3879662-can-i-remotely-monitor-a-patient-s-covid-19-symptoms>

Can the My mhealth app COVID-19 Virtual Ward be used?

Yes. Some practices have access to this app and it can be used for this purpose. Please note that if patients use this, they will be sending information on their readings to you. They still need counselling that they need to act on the results and not to wait for a response from the practice if their sats are low. For more information see <https://mymhealth.com/covid-app>

Can the Ardens Airmid App questionnaire be used?

Yes. Practices have access to the free Ardens oximetry@home template and Airmid App which links to this. For further information see <https://support.ardens.org.uk/support/solutions/articles/31000158558-remote-monitoring-covid-oximetry-home>

End of monitoring with the oximeter

How is the pulse oximeter decontaminated between patients?

Clean the pulse oximeter between each patient within multi-patient settings and on return from a home care setting, following the [published guidance](#)

After decontamination equipment will need to be checked before it is used again, to ensure it is working correctly in line with national guidance for reusable electronic equipment.

What if a patient does not return the device?

Most people should return the device; this has been the experience locally - but there is no need to chase patients who have not returned their device. NHS England has built in some attrition to the modelling and further supplies can be ordered if needed.

Demand and supply of oximeters

How have you worked out the number of oximeters?

Potential demand has been assessed based on incidence, referral criteria (where this is possible to quantify) and 70% minimum return/reuse as required by NHS England. Supply to PCN has been calculated pro-rata to practice population for distribution from the CCG to PCNs.

Will supply meet demand?

A total of 1100 oximeters have been made available to the CCG to commence this service. Our modelling shows that with a 7-day incidence of 300 cases per 100,000 this supply would last for 15 weeks and with a 7-day incidence of 200 cases per 100,000 this supply would last in excess of 20 weeks.

What if we need more oximeters?

In the Vale, PCN will be responsible for any onward distribution to practices, monitoring the PCN supply and mutual aid between practices, as its possible for a smaller practice to experience peaks and troughs in demand.

Practices will be responsible for the provision of oximeters to patients, return of oximeters and decontamination.

In York the Covid Hub-SPA will operate this on behalf of practices.

How do we order more oximeters if we need them?

Additional oximeters can be ordered by the CCG in batches of 100 with delivery within 3 working days. Please email valeofyork.contactus@nhs.net with a request. Please use oximetry@home as the subject line.

Recovery and Discharge

Patients who show no signs of deterioration within 14 days of the onset of symptoms should be discharged and supplied with safety netting information, advice on how to return the oximeter.

- Patients can be directed to [Your Covid Recovery](#)
- Patients may also be directed to locally available Social Prescribing services, Health Trainers or Health Navigators.
- We have also been working with YHTH who have provided the attached booklet on post Covid-19 Rehabilitation, which can be used for patients leaving this service.



PIL 1463 Recovering
from coronavirus v1 fi

Annex 5: Patients Who Have Chronic Hypoxia; support information for GPs.

The York Teaching Hospital NHS Trust respiratory consultants have provided the following advice for GPs managing those with chronic hypoxia.

Advice for GPs managing patients who have chronic hypoxia

- Remember these patients are higher risk.
- The patient may know what their normal sats range is.
- Their normal sats reading may also be found in the practice or secondary care annual review.
- If a normal reference reading is not available, then in general stable sats of 88-92% in patients with COPD/Fibrotic lung conditions who also feel well might be acceptable.
- If the patient is well (not short of breath and not feeling significantly more unwell than normal) but has resting sats less than 88% then further advice can be obtained by contacting the COPD Office number 01904 726448, Mon-Fri 8am-5pm. The call will be answered by the team administrator who will take a message, or a nurse who may be able to give immediate advice.
- Remember these patients are higher risk, so if they have noticed that their breathing is worse or there are other clinical signs of deterioration then call the Covid Consultant on call to arrange for further evaluation on the Covid SDEC unit rather than admit through A+E.

Assessment/monitoring/follow-up/discharge

The patient assessment for needs to be done by a GP. Who will discuss and agree with the patient; follow-up, prompts or monitoring arrangements.

Provision of Oximeters

The patient can collect/return an oximeter from the practice/hub in the same way as a patient on the oximetry@home pathway.

Annex 6: Requirements for data collection and evaluation.

- **Data collection**

New SNOMED codes have been created for COVID Oximetry @home for providers to use [SNOMED codes - NHS Digital](#). The attached slide provides information on the data that NHS Digital will supply to CCGs/providers and the information that needs to be provided by practices and collated/reported by the CCG.



Oximetry_home_data_slides.pptx

The dataset provided by NHS Digital to the CCG, at a GP practice level will be timely data for patients in the cohort (i.e. over 65 or extremely at risk) with a new diagnosis of COVID-19. Dissemination of this data to GP practices would theoretically ensure that GP practice records are fully up-to-date with new diagnoses of COVID-19, and therefore enables prompt contacts with patients for inclusion in the pathway.

It is expected that the CCG collates and returns a weekly patient identifiable dataset (plus total counts of Oximeters issued/available/returned) for all GP practices. The CCG have engaged with North East Commissioning Support (NECS) to be able to extract the required dataset from GP practice systems on a weekly basis, and for all practices (as per the specification in the attached slide pack above), however this would be contingent on the information being captured consistently in GP systems, using the SNOMED codes specified in the slide pack above.

The CCG would recommend that GP practices use the Ardens collection templates for Oximetry @ Home for both SystmOne and EMIS to ensure that data is captured in a consistent way, to enable efficient collection and submission of the required data to NHS Digital. *At the time of publication, it is unknown whether all GP practices have access to these collection templates, or whether the EMIS version is finalised. Further updates and engagement with all practices will commence early in the New Year.*

Please Note; the CCG is required to collect information on the Number of sats monitors issued/returned, therefore, this information is needed **as a minimum**

- **Evaluation of effectiveness**

So that we can learn from this and to give assurance that the service is achieving the required safety net for patients, it is proposed that the outcomes of the service are evaluated, and that the following information is collected;

- Number of symptomatic Covid+ve people offered sats monitoring
- Number of people who accepted sats monitor
- Number of people reporting abnormal sats measurement
- Patient feedback.

It is proposed that evaluation is done at week 2, week 6 and week 12.