



COVID-19 Oximetry @Home Services for care home residents

Guidance for care homes

2nd Edition – May 2021

Introduction

COVID-19 Oximetry @home services are supporting people to monitor their oxygen levels with pulse oximeters, including residents in care homes. This follows [guidance to support remote monitoring](#), using pulse oximetry, of people with confirmed or possible COVID-19, including people living in care homes.

This document brings together existing guidance into a single document with some extra detail in terms of what this means for people who live and work in care homes. The main target audiences are care home managers and staff. It was originally published in February 2021, and updated in May 2021.

It should be read alongside any locally provided advice or guidance from your local clinical commissioning group (CCG).

With thanks to NHS England and NHS Improvement for their advice on the content.

Disclaimer

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Oximetry @home service

The [COVID-19 Oximetry @home](#) and the [Covid Virtual Ward](#) programmes both describe an enhanced package of care for individuals with confirmed or suspected COVID-19 who are at risk of future deterioration, including people living in their own homes and residents of care homes.

The COVID Oximetry @home pathway is overseen by GPs and primary care teams and is generally for people with mild to moderate symptoms, complexity and acuity who have not been in hospital.

The COVID Virtual Ward is for people who have been diagnosed with COVID-19 after admission to hospital and who have moderate to severe symptoms, complexity and acuity. Care of people on the COVID Virtual Ward pathway is overseen by the hospital.

You will be told by your health care clinician which pathway your resident is on. [Academic Health Science Networks](#) (AHSNs) are supporting the uptake of these packages through the [Patient Safety Collaboratives](#) in each region of England.

A pulse oximeter helps to monitor how fast an individual's heart is beating and the level of oxygen in their blood. This blood oxygen level is the most accurate way of keeping an eye on their progress with COVID-19. An ideal oxygen level in the blood is between 95 and 99%. An ideal heart rate is between 50 and 90 beats per minute.

The services are overseen by either the local Clinical Commissioning Group (CCG) (for COVID Oximetry @home) or the hospital (for COVID Virtual Ward) and are offered as a prescribed service by a clinician.

Entry criteria

The COVID-19 Oximetry @home service [Standard Operating Procedure \(SOP\)](#) sets out who the service should be available to. This is people who are:

The COVID Oximetry @home pathway should be available to people who are:

- i. Diagnosed with COVID-19: either clinically or positive test result
AND
- ii. Symptomatic
AND EITHER
- iii. Aged 65 years or older
OR
- iv. Under 65 years and clinically extremely vulnerable (CEV) to COVID or where clinical judgement applies, taking into account multiple additional

COVID risk factors. [National criteria for inclusion on the CEV list](#) are set and updated by government.

Staffing and oversight

Clinicians will identify care home residents who would benefit from oximetry at home. This includes GPs, nurses and clinicians working in hot hubs (GP led sites providing a place to see patients with coronavirus symptoms face-to-face) or working with community teams. Referrals of the defined groups will also come via the [NHS 111 COVID Clinical Assessment Service \(CCAS\)](#), NHS Test and Trace, and hospital Emergency Departments will also be able to refer people to the Oximetry @home service. For the COVID Virtual Ward, people will be put on to this pathway by a hospital clinician, and will be discharged to the care home (or designated setting if less than 15 days since first positive COVID-19 test) with a pulse oximeter and a discharge pack.

Care home staff should contact the GP if they wish to have a resident considered for the service. Any change of care or intervention should of course involve appropriate shared decision-making between the resident, relatives, care home staff and clinician.

Legal responsibility, including ensuring appropriate clinical governance, remains with the relevant Clinical Commissioning Group. Each CCG should have a named person responsible for the establishment of the service for their area. If care home managers do not know who this lead is, they should contact their local CCG.

Page 42 of the [Care Quality Commission's 'Scope of registration'](#), states that the use of pulse oximetry for 'spot' recording is **not** included within the definition of physiological measurement. Therefore, pulse oximetry in a care home is not regulated activity and registration is not required.

Where relevant, patients may benefit from a review of long-term condition management in the context of acute COVID illness. The responsibility for this lies with the patient's primary care physician and/or hospital specialist.

Implications for care home residents

As the pandemic progresses, you are likely to have residents in your care home who meet the criteria for inclusion in the COVID Oximetry @home service. The information below describes how they are identified as being suitable for the service, and how you can support them whilst they are being monitored.

If residents wish to and are able to, they can monitor themselves. However, in practice oximeters will have to be shared within the care home requiring decontamination between each use. This means it is more likely that care home staff will manage the whole process including recording. The guidance below is based on care staff carrying out the reading.

Resident's journey

Referral (stage 1)

The resident is referred into the Oximetry @home or COVID Virtual Ward service at any point they may meet the entry criteria. For care home residents this is likely to be via their GP or 111 COVID Clinical Assessment Service (CCAS), or via a hospital clinician if the resident is in hospital. The referring clinician, or hospital discharge coordinator, will contact the care home to advise them of the referral.

Assessment (Stage 2)

Residents referred to the service should have a standard assessment (with potential for face-to-face clinical assessment if deemed necessary), with shared decision making prior to entry onto the service and a discussion about any support requirements for residents or care workers. This should happen as soon as possible, and ideally no longer than 12 hours after Stage 1. A joint decision should be taken as to who will record the readings in the oximetry diary – the resident themselves, or a care worker within the home.

It is important at this early stage to discuss the resident's wishes on future treatment should their condition deteriorate. For example, do they wish to be admitted to hospital? This conversation should include the resident (where possible), their relatives or carers and care home staff, and should lead to the creation of an individual's Treatment Escalation Plan. This shared decision should be recorded in the residents' care plan.

Preparing staff (Stage 3)

Care home managers should formally delegate responsibility for managing the use of the oximeters to named care home staff. Responsibilities will include: timetabling the use of oximeters by potentially multiple residents, decontamination, taking, recording and submitting readings. Arrangements should reflect and ensure that the clinical ownership of the task remains firmly with the clinician / clinical team.

Care staff who are undertaking the use of the oximeters should be provided with:

- This guidance which explains how to take, record and submit readings
- Multiple copies of the patient information leaflet to give to residents
- Paper copies of oximeter diary per resident using the service (see Appendix)
- Contact details to report oximetry readings and symptoms. These will include details of who to contact out of office hours.
- Information about how the regular follow up calls or meetings with a clinician will be managed for each resident using the service.
- Information on when to contact emergency services.

Accessing and using the pulse oximeters (Stage 4)

The pulse oximeter should be supplied by the clinician immediately if the resident is assessed face to face or within 12 hours if the resident is assessed remotely.

For any residents not seen face to face, NHS Volunteer Responders are available to help deliver oximeters to the care home once your Primary Care Network clinical lead has arranged for it to be collected. Care homes have to ask for the oximeters via the clinical lead if they have not already been supplied. [See further details on the NHS Volunteer Responders.](#)

Care homes should provide residents with access to a pulse oximeter, a leaflet explaining the process, and information about how the readings will be used, including how regular follow ups with the clinician will be managed and when the care home may need to contact emergency services. Follow ups should be agreed between the clinician and the care home on a person-by-person basis.

Care home staff should take oximeter readings three times per day when possible (see details below on how to take, record and submit readings). The clinician and care home staff may come to an agreement on the frequency of readings, and arrangements for prompting to take the reading.

Care home staff should:

- Contact the GP or 111 if saturation reading is 93% or 94%
- Call 999 if saturation reading is 92% or less

The decision to escalate for emergency admission will be determined after appropriate shared decision-making between the resident, relatives, care home staff and clinician.

Monitoring (stage 5)

The care home staff carrying out the readings should take each person's pulse oximetry readings 3 times per day, unless instructed otherwise by a healthcare clinician.

Check-ins with the health care clinician should confirm that they are using the oximeter and diary correctly, and that the readings are 95% or above. The frequency of check-ins can be reviewed with the resident and care home if appropriate.

Recovery and discharge (stage 6)

Residents who do not show signs of deterioration within 14 days of onset of symptoms should be actively discharged from the COVID Oximetry @home service or the COVID Virtual Ward by a clinician. This means that they no longer need to have pulse oximetry readings. Their care worker will be supplied with leaving information and safety netting advice. If care staff are concerned about a resident after discharge from the service, they should contact the GP or 111 service.

Residents may continue with pulse oximetry readings for a shorter period subject to clinical review.

Residents who remain symptomatic at 14 days should receive a further clinical assessment and action taken as clinically appropriate.

Oximeter supply and safe re-use

Oximeters for home use must meet [ISO 80601-2-61:2017](#) and be CE marked.

Your Primary Care Network Clinical Lead can arrange for pulse oximeters to be delivered to your care home. The suggested ratio is 1 oximeter per 10 residents with a minimum of 2 per home. Oximeters will not be automatically provided. Care homes need to request these via the PCN Clinical lead if they do not have them.

Particular care needs to be given to ensuring reliable arrangements are in place for their immediate decontamination between each resident usage.

Prior to being distributed for usage, oximeters must be decontaminated in line with infection control policies for reusable electronic equipment. They must be checked that they are functional and safe for re-use prior to being allocated to new residents. This should be done in line with local and national guidance for reusable electronic clinical monitoring equipment.

Further support

Details of further advice, guidance and training materials including [Academic Health Science Networks](#) (AHSNs)/Patient Safety Collaborative contacts for bespoke support are available at [FuturesNHS](#). You may also contact your PCN clinical lead for support and advice.

Health Education England has developed [a free e-learning tool](#) on using pulse oximeters and measuring results. You do not require a log in and is suitable for anyone caring for someone on the COVID Oximetry @home or COVID Virtual Ward pathway.

Any safety concerns regarding oximeters should be reported to the MHRA via the COVID yellow card scheme (select 'other devices/equipment'; <https://coronavirusyellowcard.mhra.gov.uk/>) and NHS England and NHS Improvement informed 7 | COVID oximetry @home SOP (england.home@nhs.net). Local clinical engineering departments and medical device safety officers (MDSOs) should also be informed.

If there are any issues accessing the site or for further queries, please email england.home@nhs.net.

COVID diary for use in a care home setting

The [COVID diary](#) is for use in care home settings to be able to track and monitor a resident's progress. If your care home does not have access to a pulse oximeter, you should contact your named PCN Clinical Lead who can liaise with the CCG to ensure delivery.

The diary can be used in conjunction with a more clinical and remote monitoring approach which is described in the [remote monitoring guidance document](#).

Pulse oximeter for heart rate and blood oxygen level

A pulse oximeter helps to monitor how fast an individual's heart is beating and the level of oxygen in their blood. This blood oxygen level is the most accurate way of keeping an eye on their progress with COVID-19. An ideal oxygen level in the blood is between 95 and 99%. An ideal heart rate is between 50 and 90 beats per minute.

How to use a Pulse oximeter

Care home staff should follow these instructions to make sure the pulse oximeter gives an accurate reading:

- Remove any nail polish or false nails and warm the individual's hand if cold.
- Make sure they have been resting for at least five minutes before taking their measurement.
- Their hand should be resting on their chest at the level of the heart and held still.
- Switch the pulse oximeter on and place it on their finger. It works best on their middle or index finger (shown in the diagram). It should not be used on their ear.
- The reading takes time to steady. The pulse oximeter should be in place for at least a minute, or longer if the reading is not stable.
- Record the highest result once the reading has not changed for 5 seconds. You can use the COVID diary to do this.
- Be careful to identify which reading is their heart rate and which is the oxygen level.

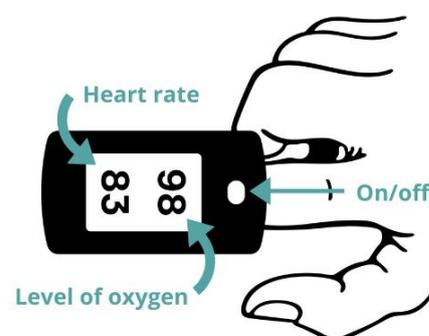


Image courtesy of Denis Barbulat

[See this NHS video guide to taking an oxygen saturation reading.](#)

Cleaning and decontamination

If the pulse oximeter is to be used on more than one individual, it should be cleaned between every single person use following these [Government guidelines on decontamination](#).

Cleaning procedures for oximeters must follow manufacturers' instructions. Liquids should generally not be used on these devices due to the risk of fluid ingress damaging circuits. Disinfectant wipes should be used where possible.

Recording and acting on the result

Write the information in the diary (see Appendix 1 or [download a Word version](#)). The first measurement is the resident's baseline – so record this in the highlighted blue area. Then take recordings three times a day, at the same time each day – for example when they normally eat in the morning, at lunchtime and in the evening. Take extra measurements if you feel there is a change in their health.

Keep track of the resident's temperature if you can. However, as long as their oxygen level and breathing are normal, you do not need to contact your GP/NHS 111 if they have a temperature or other symptoms, such as cough, muscle aches, tiredness and change in taste or smell. Paracetamol and regular fluids can help with these symptoms, and most people will get better by themselves within two to three weeks. Please see the [NHS website on self-isolation or how to access care](#).

When to ring 999

Ring 999 if your resident has one or more of the following and tell the operator they have/may have coronavirus

- They are unable to complete short sentences at rest due to breathlessness
- Their breathing suddenly worsens within an hour
- Their blood oxygen level is consistently less than 92% (check their blood oxygen level again straight away – if it's still 92% or below call 999)

OR if these more general signs of serious illness develop:

- They are coughing up blood
- They feel cold and sweaty with pale or blotchy skin
- They develop a rash that does not fade when you roll a drinking glass over it
- They collapse or faint
- They become agitated, confused or very drowsy
- They have stopped peeing or are peeing much less than usual

Please give the oxygen saturation reading to the 999 operator.

When to ring the GP or 111

Ring your GP/111 as soon as possible if your resident has one or more of the following and tell the operator they have/may have coronavirus

- They slowly start feeling more **unwell or breathless**
- They are having difficulty breathing when getting up to go to the toilet or similar
- Their blood oxygen level is 94% or 93% when sitting or lying down, and remains at this level after being re-checked within an hour
- They sense that something is wrong (general weakness, extreme tiredness, loss of appetite, reduced urine output, unable to care for themselves as they usually would – simple tasks like washing and dressing, if this is something they could usually do)

Remember some people with COVID-19 infection may develop other problems or have other causes for their symptoms. If the individual develops other concerning symptoms, the NHS website provides helpful advice on when to contact the GP/ 111.

The diary can be used to monitor progress of a resident during the COVID-19 clinical weekly check-in.

Useful links

Resources for professionals

[Frequently asked questions – COVID Oximetry @home and COVID virtual wards](#)

[Information on the use and regulation of pulse oximeters from the Medicines and Healthcare products Regulatory Agency](#)

[National guidance on the use of pulse oximetry in primary and community care settings](#)

[Standard operating procedure for oximetry at home services](#)

[NHS Digital COVID Oximetry @home information](#)

[NHS Volunteer Responders](#) to assist with the drop off and collection oximeters.

[Guidance on how to safely and easily clean oximeters](#) between each patient.

[FutureNHS platform](#). Step by step toolkit. For access, email home@nhs.net.

[HSJ e-learning toolkit](#)

[E-learning for carers modules](#)

[The AHSN Network](#) support and information

Resources for patients, carers and families

An NHS [video](#) featuring Dr Matt Inada Kim showing how to use a pulse oximeter at home. This [video is also available in a number of alternative languages](#) on the Health and Care video library.

A [patient diary](#) including step by step instructions on using an oximeter and what to do in case of concerns.

[Translated](#) and [easy read](#) versions of the patient diary are also available.

This [NHS animation](#) shows how to use the pulse oximeter and diary and/or app provided.

[Leaflet: Suspected coronavirus \(COVID-19\): important information to keep you safe while isolating at home](#)

[General information about looking after yourself at home when you have coronavirus is available on NHS UK](#), including information on pulse oximeters.

Other useful resources

[How pulse oximeters have been a lifeline during the pandemic and could change how we provide care](#). Blog by Matt Inada-Kim.

[COVID virtual wards](#)

