

Standard Operating Procedure for the discharge of patients with confirmed 'moderate' COVID-19 from the Emergency Department including the COVID Oximetry@Home pathway.

Context

With the current increased attendances relating to COVID-19 since December there is a need to standardise our discharge criteria so that patients receive safe advice with follow up and monitoring if appropriate. A snapshot audit from the 30th December 2020 to 6th January 2021 suggests that approximately 50 patients were discharged to home from the red zone of RSCH ED (either 2B or Red Assess).

This SOP outlines the suggested discharge criteria that the patient needs to fulfill in the ED/Acute Floor. As always it goes without saying that these are guidelines and clinical judgment should be used. This particularly applies to those patients who may have had a senior medical consultant review and who on a case-by-case basis may require certain alterations to the discharge process and TTO's. Current BTS guidelines suggest targeting sats above 90% for inpatients. However, this SOP relates to patients being discharged home who potentially need monitoring in the community and as such uses NHSE Primary care parameters.

This SOP also outlines the appropriate written discharge information and plans for follow up in the community.

Use this guideline for those patients who would be appropriate for readmission and for full escalation of care.

Discharge criteria

1. Follow the management and investigations as outlined in the BSUH COVID-19 assessment prompt card
2. For any patient in who discharge is considered perform the Sit to Stand Test

Sit to Stand Test 1min: stand up and sit down repeatedly from a chair for 1 minute as fast as possible. Test Oxygen saturations after.

Discharge criteria

- Is the patient safe to be in isolation at home i.e. can they cope at home with their acute illness while self isolating?
- Alternative diagnosis has been considered
- No persistent tachypnoea/ respiratory distress at rest
- NEWS2 score < 3
- CXR- normal or mild changes
- Bloods : no acute major derangements (no new organ dysfunction, CRP <100)

Criteria for MILD COVID diagnosis and discharge:

SpO2 > 94% (or 1-2% less than usual e.g. in COPD patients), **no significant desaturation on 1min sit to stand test (<3%)**, NEWS2 <3. RR 20-22, HR <110bpm, no significant high risk features.

Criteria for MODERATE COVID diagnosis and discharge

SpO2 92-93% (or 3% less than usual e.g in COPD, **no significant desaturation on 1min sit to stand test (<3%)**), CXR- normal or mild changes, RR 20-22, HR <110bpm, 2 or more risk factors.

If there is a significant desaturation or sats <92% then refer the patient to the medical team.

Discuss all discharges with an ED Senior doctor (ST4+ or equivalent) after reviewing the risk factors below.

From Evidence COVID – a 3% reduction in pulse oximeter reading on exercise is cause for concern in COVID-19. The 1 minute sit-to-stand test (patient goes from sit to stand as many times as they can) has been validated.

3. Review **risk factors** which increase the need for community monitoring or inclusion in COVID Oximetry@Home

- a. < 10 days from symptom onset
- b. Oxygen saturations 92-94% (or 88- 92% if T2TF*)
- c. Mild desaturation on 1min sit to stand test >3% from baseline but above 92%
- d. Fever for >7 days
- e. **Vulnerable group?** – see below
- f. Age >70
- g. Lives alone
- h. RR 20-22
- i. CRP>100

e. continued

Is your patient in a vulnerable group? Assess whether increased risk of severe illness with COVID-19 against the list of conditions which lead to 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

Discharge process and follow up

For MILD COVID diagnosis and 1 or none of the above risk factors

- **Written information to be provided at time of discharge**
 - a. All patients should be provided with a copy of their ED discharge letter from symphony.
 - b. All patients should be given a copy of the NHS leaflet :
 - a. Suspected coronavirus (COVID-19): Important information to keep you safe while isolating at home

https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/12/C0719_COVID-Isolating-at-Home-Safety-Netting-Leaflet-Revised-FINAL-171220.pdf
 - c. COVID is suspected- patients should apply for a test online at gov.uk, or call the Coronavirus Testing Contact Centre free on 119 from 7am to 11pm
 - d. Patients with a confirmed COVID swab should follow PHE guidance and isolate (along with household if relevant)
 - e. TTO: patients with COVID will not be able to access pharmacy so dispense from ED any necessary medications.
 - f. Do not discharge on VTE prophylaxis or dexamethasone but note that this may alter for some patient's after a senior medical review on a case-by-case basis.
 - g. Provide an appropriate contact for **patient activated** follow up, most likely their GP. The above leaflet explains symptoms to assess for and when to call 111 or 999.
 - h. Advise patient to return to ED if symptoms worsen
 - i. Those with ongoing symptoms should be assessed by their GP for referral to appropriate secondary care COVID clinics

For MODERATE COVID diagnosis and 2 or more risk factors – this patient is appropriate for referral to the COVID Oximetry@Home (CO@HOME) pathway.

- **Please provide the patient a COVID Oximetry@Home discharge pack**
 - a. The discharge packs are in the Red Resus area RSCH, the UTC treatment room RSCH and in the Red zone at PRH
 - b. The discharge packs contain a labelled pulse oximeter e.g. A 24, an NHS Leaflet re COVID, a patient information leaflet explaining what is required from the patient and a diary relating to the Home Oximetry service. The written information clearly explains the parameters the patient will monitor and what to do if and when the patient needs medical assistance or 999.
 - c. All patients should be provided with a copy of their ED discharge letter from symphony.

Referral process

- Patients being referred into the COVID Oximetry@Home service will have a strong clinical suspicion of acute COVID infection and/or a positive test
- Patients will meet the BSUH acute floor discharge criteria and have no exclusion criteria for the service (see prompt cards)
- A clinician must complete the PANDA referral form: A&E: COVID OXIMETRY@HOME
Please include the number of the pulse oximeter (a unique sticker is on each one) given to the patient e.g. A24 on the referral form. More importantly include as much clinical info as possible- obs, history, results etc as the GP who will review the patient cannot access BSUH records or ICE necessarily

The following should be considered in determining whether the CO@home pathway is appropriate for the person or whether they require alternative care or monitoring:

- Does the person or their carer have the capability to understand how to use the pulse oximeter, including how to apply it to their finger and how to read the oxygen saturation measure and pulse rate?
 - Does the person know what to do if their readings indicate deterioration and have the confidence to act on this?
 - Does the person have any physical issues that could increase the risk that they may struggle to get accurate readings or use it correctly? (For example, poor eyesight, arthritis in their fingers, Reynaud's, poor peripheral circulation).
 - Is the person able to use the phone?
- a. Patients with a confirmed COVID swab should follow PHE guidance and isolate (along with household if relevant)

- b. TTO: patients with COVID will not be able to access pharmacy so dispense from ED if necessary.
- c. Do not discharge on VTE prophylaxis but note that this may alter for some patient's after a senior medical review on a case by case basis.

Clinical Pathway

Once the referral is received then an initial patient assessment via telephone will be undertaken by an experienced GP competent in assessment of COVID-19 respiratory conditions using clinical judgement to diagnose and assesses against COVID pulse oximetry inclusion criteria. This will be within 24 hours of the patient being discharged. They will provide support and supervision to patients on the pathway. This will be the same process across RSCH/PRH irrespective of provider.

- The GP who reviews the patient is not the usual GP for the patient but is provided by a service aligned to HERE/ABC Federation.
- The GP will review their clinical state daily for 2-3 days when they will be discharged back to the patient's own GP.
- There will be a daily online MDT with senior Acute Medicine clinician input from BSUH to discuss patient's on the pathway.
- There is an option to keep a patient in the service for up to two weeks in exceptional circumstances.
- Used monitors will be returned to the RSCH equipment library. The envelopes are labelled with a return address but are not currently pre-paid. Please encourage patients to return the pulse oximeter.

REFERENCES

1. With thanks to St George's University Hospital ED team and Royal Free NHS Trust ED for sharing their ambulatory pathways for management of confirmed COVID.
2. NHS London Clinical Networks : Primary Care and Community Respiratory Resource Pack for use during COVID-19
3. <https://www.england.nhs.uk/coronavirus/secondary-care/discharge/>
4. <https://www.gov.uk/government/publications/COVID-19-stay-at-home-guidance/stay-at-home-guidance-for-households-with-possible-coronavirus-COVID-19-infection>
5. **The "virtual wards" supporting patients with COVID-19 in the community**
BMJ 2020; 369 doi: <https://doi.org/10.1136/bmj.m2119> (Published 05 June 2020)