Purpose of the Guideline

The purpose of this guideline is to provide clinical staff with information regarding the use of non-invasive ventilation in the medical management of patients with suspected or confirmed COVID-19 with identified clinical symptoms.

This guideline has been developed using the current national guidance provided from British Thoracic Society (March 2020) and NHS England Guideline (April 2020).

Please refer to the clinical guideline CG-10386-1: Initial management of patients with suspected or confirmed COVID-19 for full investigations and clinical treatment

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NB: NIV refers to non-invasive ventilation. CPAP is used in severe type I respiratory failure, however, NIV or otherwise known as BiPAP is used for those patients with type II respiratory failure. (See appendix 1 for flow sheet of suitable patients)

1. Background

Current data for hospitalised cases show that coronavirus (COVID-19) infection causes acute pneumonitis in approximately 10-20% of patients and can lead to ARDS-like syndrome with severe hypoxaemia. A large proportion of patients with type 1 respiratory failure (RF) require invasive mechanical ventilation.

2. Rationale

The number of COVID-19 patients is expected to increase dramatically in the coming weeks (surge 2). CPAP can improve oxygenation and reduce the work of breathing by recruiting atelectatic lung regions. However, there are no data to confirm the role of CPAP in COVID pneumonitis and there are also concerns that prolonged CPAP use could increase the risk of complications around intubation and worsen outcomes of subsequently mechanically ventilated patients.

Before CPAP/NIV is commenced, an escalation decision must be made for both EPARs and if appropriate for ITU/intubation. NICE guidance (2020) recommends the use of CPAP in those for intubation within the confines of the ICU in the first instance. However, it is less preferable, though potentially unavoidable as cases increase, to cohort patients outside HDU/ICU. But if so, immediate intubation and transfer to ICU must be possible (if compatible with treatment escalation plan).

CPAP, NIV and high flow nasal oxygen (HFNO) are considered aerosol generating procedures (AGP) [https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-infection-prevention-and-control-guidance-aerosol-generating-procedures], thought to increase the chance of transmission of the coronavirus between patients and to staff. Therefore the provision of these treatments are limited by infection control, in addition to the availability of trained and experienced staff. As a result, NIV/CPAP/HFNO for patients for ward based care and not for intubation, location will be limited to side rooms and carefully cohorted bays with doors, on the respiratory ward or F7 ward.

It is essential to assess the response to CPAP delivered in the appropriate environment within 30-60 minutes of initiating, with regular comprehensive reviews as clinically indicated (minimum of twice daily from medical team). The nurse will need to remain with the patient until first ABG is recorded and reviewed by medical team.

It is recommended advice is sought from the respiratory consultant or specialist respiratory registrar (in hours). Out of hours, seek advice from the respiratory consultant (if on call overnight; check with switchboard), or intensive care/critical care outreach.

Classifying patients as COVID and ‘non-COVID’ cases is not possible with complete certainty. The limitations of COVID-19 PCR swab testing means that a negative test does not conclusively exclude COVID-19 infection. The interpretation of a negative test result will depend on pre-test probability, which is led by community prevalence and clinical suspicion of the clinician assessing the patient.
In summary therefore, if cohorting is necessary, patients will be cohorted primarily on clinical suspicion.

3. Patients suitable for this pathway
   1. Suspected or confirmed COVID-19 pneumonitis
      (Note clinical guidance CG10003-6 “Non Invasive Ventilation (NIV) Guideline for Type II Respiratory Failure due to an exacerbation of COPD at West Suffolk Hospital” on Trust Intranet http://staff.wsha.local/Extranet/ClinicalGuidelinesandProtocols/CG10003NonInvasiveVentilation.pdf)
   2. Higher oxygen requirements (patients with low oxygen requirements should be monitored and considered for CPAP in case of deterioration) and following first line treatments, with clinical review for effectiveness
   3. No haemodynamic compromise (systolic BP>90mmHg)
   4. No contraindication to using NIV/CPAP (e.g. pneumothorax, low consciousness level, unable to tolerate face mask, vomiting)
   5. Patients not for ICU and more than one organ failure

NB: Refer to clinical guideline CG-10386-1 and ICU pathway.

4. Patient location decisions/ factors to consider (see appendix 2)
Placement of patient’s requiring NIV needs communication between appropriate teams according to the patient’s condition, escalation status and capacity levels within the designated area. It is stressed that for patient safety that good communication in times of reduced capacity in these designated areas is key.

  • For those patients that are for full escalation, placement should initially be the ICU (as per NHS guidance - “2.2.3. It is less preferable, though potentially unavoidable as cases increase, to cohort patients outside HDU/ICU. But if so, immediate intubation and transfer to ICU must be possible (if compatible with treatment escalation plan. The use of a mobile emergency rapid intubation team (MERIT) is suggested.” However, this will require careful monitoring and review on a daily basis during times of reduced capacity. In such times, these patients may need to be placed within the respiratory cohort area (this must only be achieved following consultant to constant communication, with CCOT input)

  • Patients deemed as requiring NIV/CPAP and are not for escalation (ward based care/ not for intubation) can be initially managed on F7 to start with, until COVID 19 pneumonitis has been excluded based on negative PCR and clinical suspicion. Once COVID infection is excluded, these patients can be managed on G9.
• G9 side rooms are used for NIV in patients with a low clinical suspicion of COVID and one negative swab result. However, these patients can be cohorted into a bay with a closed door

**NOTE:** cohorted NIV patients must not exceed four per bay, with an expected nursing ratio of one trained nurse to two CPAP/NIV/HFNO patients. However, if bed capacity is extremely challenged, the remaining two may be used (last resort) for non AGP positive patients. This decision needs to be made together with Nurse and Clinician in charge and Matron of the Day to ensure staffing requirements are met.

• Critical care outreach team (CCOT) MUST be involved/ informed for those patients that are being considered for NIV (outside of the ICU). In addition, CCOT will ensure they keep a log of these patients, of which is updated on a daily basis and communicated to patient flow team, respiratory physicians and HoN for DP

• Close liaison between Respiratory and Critical Care teams is a key factor for successful outcomes.

• Patients on NIV should be managed according to the appropriate infection prevention and control (IPC) recommendations from Public Health England (PHE). See with reference to Aerosol generating procedures (AGP).

• Patients on NIV should be managed in side-rooms initially (negative or neutral pressure) whenever possible

• Air exchanges in side-rooms should be checked and adhere to standard IPC guidelines (open windows)

• Factors to take into account include: access to toilet facilities/ thoroughfare for other patients/relatives/staff/ air flow and air exchanges/ mixed sex breaching to be accepted in circumstances of stretched capacity OR areas deemed as level 2

• It should be acknowledged that further capacity may be required if activity and acuity increases, however, we will be limited by the availability and ratios of appropriately trained staff to patients, location for NIV provision (side rooms and bays with doors) and less likely NIV devices (up to 14 units capacity)

• Low clinical suspicion with a negative COVID PCR result will continue to have NIV for COPD exacerbations in G9 (as a respiratory ward) side rooms as per Trust protocols for now. If these patients are initially placed on F7, transfer to G9 should be considered when clinically indicated and only with managing consultant authorisation (the same cohorting model can be used on G9)

• The emergency department can initiate NIV if absolutely necessary following first line treatments. However, it must be stressed that this should only be commenced if it is required for life saving reasons. Emphasis should be on expedient transfer of the patient to the allocated location. This will ensure that patients are not delayed in ED (RAT). If NIV has to be commenced in the ED, it is important to open the rear exit door of the RAT area to ensure adequate ventilation and reduction of viral load.
NB: It is recognised that the provision of NIV to acutely unwell patients requires the support of appropriately skilled and competent staff.

**However, NIV is an emergency life-saving intervention; to avoid delays in management, a defined internal standard of 90 minutes, to start treatment after the decision has been made has been set. Delays beyond this risk patient safety**

At this point treatment with IL-6 inhibitor (Tocilizumab) should be considered with only a 24-48 hour available window available


5. Patient pathway (depending on results/ clinical condition) (Appendix 2&3)

Patients can be co-horted into F7 bays depending on their status as follows:

A. **COVID positive** patients requiring NIV – can be co-horted into a bay (not to exceed 4 in the bay). The bay of choice should be bay 5 followed by bay 4 etc

B. **COVID negative** patients with **high** clinical suspicion requiring NIV **must** remain in a side room until they receive a positive test (they can then be co-horted as above in section 5.A) or clinical suspicion is reduced to that of not-suspected (following which they can be considered for transfer to the non-Covid respiratory ward)

C. **COVID negative patients** with low clinical suspicion requiring NIV – should aim for respiratory ward side room. However they can be co-horted within a bay when side room capacity is challenged (G9 with doors closed on the bays).

D. Patients requiring NIV whilst awaiting a swab result must be placed in a side room (this could be F7 or G9 depending on clinical picture).

**NOTE: the placement of patients from group D needs careful consideration, using members of the appropriate acute team (Including, F7 nurses, on call doctors, outreach team).**

6. **High flow nasal oxygen (HFNO)**

- In patients **not** for intubation, this could be considered as an alternative to the use of CPAP in severe type 1 respiratory failure.

• If oxygen resources/flow rates become a concern in the Trust, HFNO may be withdrawn again at short notice. (Tactical / Site management will communicate out to ward staff if this is becoming a concern in their area).

• When side room and cohorted areas for AGPs have spare capacity to provide care above and beyond those requiring NIV, patients deemed suitable for intubation could be trialled on HFNO first, to delay or avoid admission to ICU. This would need to be considered on a case by case basis, with discussion between senior ICU and Medical clinicians, and CCOT.

• HFNO in these respiratory areas must not exceed 40 litres of oxygen. If patients are requiring more than this amount, along with high percentage delivery, escalation to CCOT and ICU is necessary.

• The removal of HFNO should be considered when oxygen levels reach critical low level. Oxygen levels are monitored daily by the estates team who will escalate to tactical if this occurs. Tactical will need to discuss with the consultant of the day and the outreach team/ ICU team prior to removing any HFNO (as these patients will need to be reviewed).

7. Use of nebulisers in suspected/ confirmed COVID-19 infection (appendix 5)

• Advice published by PHE/BTS states that nebulisation does not create an aerosol of patient-derived viral particles and therefore does not represent an aerosol generating procedure. As such standard PPE with a surgical facemask is appropriate for patients receiving nebulisers.

• We recommend that both in primary care and in the hospital setting, nebulised treatment should be used whenever it is clinically indicated (most commonly for treatment of Bronchospasm in those with pre-existing lung disease e.g. asthma / COPD).

• It may be necessary to entrain nebulised medications within the NIV circuit whilst the patient receives ongoing pressure support. If this is necessary please follow the guidance in appendices 4 for the correct set-up.

• Ensure that the nebuliser canister directly connects to the non-vented mask via the T-piece within the kit.

• Do not place the viral filter between the mask and nebuliser canister as this will prevent administration of the drug and will block the filter.

• Ensure that a nebuliser compressor is used or oxygen, dependent upon the patient’s oxygen demands.

• Further oxygen can be entrained if necessary to maintain the target SpO2 range.

• Ensure that the nebuliser canister is in the correct horizontal plain so that it can function effectively.
8. Masks (appendix 4)
   • Well-fitting oronasal/full face or total face masks.
   • Use only a non-vented mask with a filter above the exhalation port in the circuit.
   • Ensure that the ventilator mode employed supports the use of non-vented masks and exhalation ports.
   • Sequence of actions: NIV mask on → ventilator on; ventilator off → NIV mask off.
   • Full PPE/FFP3 to be used for 30 Minutes post removal of NIV.

9. Filters
   • A viral/bacterial filter (Intersurgical clear- therm 3 HMEF reference 1541000 / Altech Bacterial/Viral filter Reference AL-08023.V001) should be placed in the circuit between the mask and the exhalation port (see appendix 4).
   • The filter at the end of the circuit (machine end) can remain in situation
   • Viral/bacterial filters should ideally be changed every 24 hours or sooner. (There is a risk that they will become wet from exhaled gas and this may increase resistance to flow.)
   • Change of the viral/bacterial filters will activate an alert on e-Care. This can be set up by using Powerchart, selecting request and care plans and adding in NIPPY filter change. The user should sign the request, this will then result in the order being set up to appear as a reminder in care compass every 24 hours after initial request.
   • Blocked filters can be mistaken for clinical deterioration; this issue is remedied by changing filters.
   • An external humidifier must not be used.

10. Oxygen
    • Oxygen can be entrained into the circuit and this should be done at the patient end (see appendices 4) or via a T piece placed between the CPAP device and the tubing.

11. CPAP/NIV devices
    • Portable devices (i.e. NIPPY S, NIPPY 3, NIPPY 4) can be used to deliver CPAP. Ensure that the CPAP device is set in a fixed pressure mode. Note that the above devices do not have an air-oxygen blender. High/low flow alarms can be set on NIPPY ventilators when in CPAP mode. Careful monitoring for circuit disconnection and an exhalation filter blockage is required.
• **See appendices 6 and 7** for the correct set up and usage of the NIV machines for the provision of CPAP.

• Please contact the critical care outreach team on medic bleep for further advice

• (Note clinical guidance CG10003-6 “Non Invasive Ventilation (NIV) Guideline for Type II Respiratory Failure due to an exacerbation of COPD at West Suffolk Hospital” on Trust Intranet

12. Ongoing treatment/ nursing care
    • Continuous oxygen saturation monitoring for those patients in side rooms on NIV/HFNO.

    • If in cohort bay to be on hourly observations (be mindful of patients rest periods/ need for sleep)

    • Telemetry for all patients with clinical indication (Pulse rate >120 bpm, Dysrhythmia or possible cardiomyopathy).

    • Point of care Blood Gas analyser should be available/ nearby

    • Full PPE/FFP3 must be worn when entering side rooms/ bays with AGP

    • Use the NIV care plan within e-Care

13. Commencing and reviewing COVID-19 patients on NIV
    • After NIV is applied, the patient should be reviewed at 30 to 60 minutes to detect failed response or further decline. If the patient responds, close observation and monitoring must continue for a further six hours to ensure that no decline occurs. Careful monitoring thereafter must continue.

    • These patients will be reviewed in their respective wards by the teams on the wards by the following methods:
      • One hour after NIV commencement or after first ABG (whichever is first)
      • Every ward round (patient must be seen by the consultant on duty)
      • At least twice per day by the doctors or more frequently if the patient’s condition dictates
      • Patients on the cohort ward on CPAP must be handed over to the on call medical team out of hours inclusive of being on the ‘sick list’
• The respiratory consultants will be available to provide advice when needed to help with specialist input. If they are not available, refer to the ICU SpR or consultant on call

• Once a decision is made to initiate NIV please get in touch with a member of the Critical Care Outreach Team for assistance

• The medical teams must ensure that they discuss these patients with the ICU consultant daily to ensure good communication and appropriate treatment plans

• Any patient for intubation will need close support and liaison with the ICU team. Please see the CPAP/NIV diagram

14. Staffing and training
• Staff looking after patients using NIV must ensure that they wear the identified PPE at all times (PPE FFP3)

• The ratio of nurses to NIV patients should be as follows (where possible):
  o RN with appropriate NIV skills/ training to two -patients on NIV and
  o Another member of staff to assist with treatments/ care (NA/ student/ OSCE nurse)

• Training will be offered where possible for the staff working in this area, along with competencies assessment

• The Critical care Outreach Team will provide support (where possible) as is usual process

*In non-surge situation, adhere to national recommendations as a minimum and adapt according to patient acuity and local circumstances (e.g. impact of PPE, side-rooms). FICM and BTS recommend a 1:2 to 1:4 nursing model, providing that there is provision for a minimum of 1:2 care for acutely unwell patients. Lower dependency is possible when NIV/CPAP requirements reduce to nocturnal use only.*

If the number of patients requiring NIV exceeds (according to acuity) the nurse ratio available – this needs escalating to matron of the day and the on-call Tactical Management team.

15. Patients already managed under home ventilation services who are admitted to hospital with suspected or confirmed coronavirus infection (see appendix 8)
• Please see attached flow chart for management of patients admitted with home CPAP vs NIV

• If the decision is made to not provide home CPAP within the hospital (NIV must continue) then a letter will be provided for explanation *(hyperlink to intranet letter)* and a routine referral to Respiratory team made.
16. Tracheotomy or tracheostomy procedures (insertion or removal)

Patients with established tracheostomies using open suction should be classed as AGP and grouped with likewise patients (i.e. in side rooms or cohorted according to Covid/ non Covid criteria). Cohort within bays are preferable due to the increased risk of nursing these higher risk patients in side rooms.

Please refer to Trust Policy: Tracheostomy / Laryngectomy: Managing the Patient


Patients considered for the respiratory ward should have an established, long term and stable tracheostomy. Patient admitted to WSH with a Tracheotomy or Laryngectomy should be discussed with both the Critical care and Respiratory consultant to identify the most appropriate place for admission. Nurse in charge of respiratory ward would also require consulting. The purpose of admitting patients to Critical Care or the Respiratory Ward is to ensure they receive the specialised nursing care they require. The responsibility of these patients remains with the admitting consultant, throughout the patients stay.

The head, neck and tracheostomy clinical nurse specialist must be informed of these patients admissions. In addition, please inform the critical care outreach team on medic bleep 666.

17. Ceilings of care decisions and EPARS

NICE strongly advocate the early discussions seeking to establish ceilings on presentation of the patient so as to avoid inappropriate ventilator support https://www.nice.org.uk/guidance/ng159

- An escalation plan (EPARS) must be completed and documented before initiating NIV.
- Refer to EPARS process flowchart for COVID-19 patients
- Ceilings of care need review every 24 hours, with emphasis on progress if relevant.

References:

BTS (March 2020).

Development of the guideline

Statement of clinical evidence

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Appendix 5: NIV with Entrained Nebulizer
Appendix 6: NIPPY 4
Appendix 7: NIPPY ST
Appendix 8: Home NIV flow charts/ options
Appendix 1: Flow charts for NIV treatment choices

Establish EPARS - Decision about CPR status and whether for escalation to ICU within first 4 hours of admission (Note frailty score and Discussion with senior clinicians ED/medical/

Suspected/confirmed COVID with respiratory failure (oxygen

eg. ≤92% on 4L/min (note rapid onset hypoxia), respiratory rate >30, respiratory distress

For escalation to ICU?

No
Palliation
Consider oxygen, just in case medications and palliative care involvement

Yes
Ward Based
Oxygen
- type 1 RF - consider CPAP or HFNO
- type II RF - NIV

Refer to ICU
Consider bed capacity within ICU, and escalate according to policy (NIV patients for escalation may need to be managed on the respiratory areas)

Can consider CPAP in patients with severe hypoxia (eg <SpO2 <92% on 60% or more)
CPAP to be delivered in appropriate place according to flow charts with non vented mask, filters (see picture)
start on CPAP 5 and titrate up as required (NIV in type II respiratory failure)

Appendix 2: Placement of NIV patients (F7/G9)
Placement of Patients Requiring NIV on F7/ F8 / G9

Covid Positive & NIV
Up to four patients NIV cohorted into one bay (Covid positive only)
Begin with bay 5, bay 4 etc. Placing other patients in these bays should be avoided
Mixed sex for level 2 patients is considered if need arises

Negative swab with high clinical suspicion of Covid
Must be placed in side room. May come out of side room and be cohort only when:
1. Condition shows low clinical risk
2. And second negative swab
(Placed in SR on F7)

Negative swab with low clinical suspicion of Covid
Can be cohort within bay (with other patients receiving NIV – NOT with those that are not receiving NIV/ AGP
Can be stepped down to F8 (SR) / G9 in bay with doors.
Mixed sex for level 2 patients is considered if need arises

Awaiting swab results
Must be placed in side room and cohorted accordingly
When swab result available/ according to clinical suspicion/ patient’s condition, placement must follow flowchart
AGP in HIGH clinical suspicion of COVID

Criteria - New cough or SOB with one of below:
• Ground glass on CT/CXR (characteristic CXR changes)
• Covid coding on radiology report
• Household contact
• Anosmia, covid toe, loss of taste

Rapid covid test for any patients in highly suspicious cases

If COVID not detected on PCR-
Transfer to COVID ward for further COVID testing, even if first test is negative
If NIV identified as required (home or acute) or CPAP for COVID
• first choice - covid ward side room (F7)
• Second choice - covid ward bay with doors (can be cohorted with likewise patients)
• (Caution with these sets of patients - highest potential risk for nosocomial transmission)

Step down criteria to non covid AGP areas (priority - side room on G9 respiratory/G9 bay cohort or F7)
Step down only with medical or respiratory consultant authorisation - with minimum of:
- 2 negative throat swab COVID PCR
- clinical picture changes to low clinical suspicion

Positive PCR
COVID ward (cohort together with other confirmed Covid NIV cases as priority)

Become Non-AGP
Follow appropriate Non-AGP pathways

AGP in LOW clinical suspicion of COVID
with a minimum of 2 ‘not detected’ swab results (admission and day 3 screen)

**Criteria** - SOB, new cough or change in sputum with:
- no fever
- normal CXR
- no household contact
- no other known features of COVID eg "covid toe", anosmia, loss of taste
- Acute NIV required
- Home NIV - but not independent

Place in covid ward side room until **medical consultant has reviewed and COVID has been excluded**

**First option** - G9 side room
**Second option** - cohort G9 respiratory Bay

Cohorting these patient in a bay MUST be with closed doors AND only other AGP patients with low suspicion of COVID with a valid swab negative result

**Patient no-longer AGP** - Follow appropriate Non-AGP pathway

Appendix 4: NIV Set-up with Non-vented Mask and Viral Filter
Appendix 5: NIV with Entrained Nebulizer
NIV Set-up with entrained Nebulizer via Non-vented Mask and Viral Filter for all patients During COVID-19

Non-vented Mask
Anti-asphyxiation valve (shuts off on expiration)

NIV Tubing (use either)
Integrated Exhalation Port
Ensure that this is not occluded

Nebulizer Chamber and T Piece
Ensure that the chamber is connected to a nebulizer compressor or oxygen if necessary for SpO2 maintenance

Bacterial / Viral HME Filter (Ref 15410000)
Change every 24 hours or sooner if wet / visibly contaminated

To be used with all patients requiring NIV (BiPAP & CPAP) with nebulized drug entrainment

The nebulizer canister must be directly attached to the non-vented mask followed by the filter – if this is inverted the drug will be absorbed by the filter

Ensure that O2 is utilised for nebuliser entrainment if required for SpO2 maintenance / consider further supplemental O2 if required

Ensure that the canister is in a horizontal position to facilitate effective nebulisation

Contact Outreach for advice and support
Appendix 6: (NIPPY ST4)

Getting Started
1. Press the Start/Stop button on the top panel
2. Select Mode menu
3. Select Mode (use + and – button to move on menu, followed by SET when chosen mode highlighted):
   a. Pressure Support = BiPAP
   b. CPAP

4. Press confirm
5. To Adjust pressures:
   a. Use highlighted button to select pressure
   b. Adjust with + and – button to change values
6. When settings confirmed, put patient’s Mask on
7. Press the Start/Stop and release when the bar is filled

Stopping NIV
1. Press the Start/Stop and release when the bar is filled
2. Press Yes
3. Take Patient’s mask off

Appendix 7: (NIPPY ST)
**Getting Started**

Turn on and adjust setting away from patient

1. Press the on/off button

2. Select Mode:
   - Press "Mode"
   - Use + and - to highlight CPAP or Pressure Support (BiPAP)
   - Press "Set"

3. Adjust pressures:
   - Press "IPAP" or "EPAP" button
   - Adjust values by pressing + and - button
   - Press "Set"

4. Turn machine off (setting will be saved)

5. Take machine to patient and put mask on

6. Turn machine on

**Stopping NIV**

1. Press On/Off button and confirm it by pressing and holding the On/Off button again until machine turns off

2. Remove patient’s mask
Appendix 8: Home NIV flow charts

**Home NIV**

- Does patient admit meet all 4 criteria:
  1. Admission with a non-respiratory problem
  2. No new respiratory symptoms
  3. CO2 <4% on ABG
  4. Independent with their machines

  - No
  - Yes: Change patient masks to non-vented mask and filters (via outreach team) FB (ED/ST nurses)

The placement of these patients depends largely on their presenting diagnosis and condition, therefore the following should be considered:
- Place patient on appropriate ward for their current situation if they are independent with their NIV
- If there is any concern regarding the patient's ability to look after their own NIV, discussion with the admitting team and CGT should occur and they should be placed either on the current non-acute respiratory ward (HN IR/ G9) or acute medical ward with liaison and outreach discussion.

**Home CPAP**

- Does patient meet all the following criteria?
  1. No respiratory failure. Defined by PaO2 <8 on arterial blood gas
  2. CO2 <6.5 on ABG
  3. No diagnosis of obesity hyperventilation syndrome

  - No
  - Yes: Ask patient to stop using whilst in hospital

- Issue patient letter
- Respiratory review
- Review criteria every day whilst patient remains in hospital

Continue using CPAP

Respiratory team involvement within 24 hours for advice

follow high/low suspicion covid flow charts

Home NIV/CPAP version 4, 03.03.2021