

STANDARD OPERATING PROCEDURE SCARBOROUGH, RYEDALE AND WHITBY HOME OXYGEN SERVICE AND REVIEW (HOS-AR)

HUMBER COMMUNITY SPECIALIST SERVICES

Document Reference	SOP19-029
Version Number	1.3
Author/Lead Job Title	Liz Hudson - Specialist Respiratory Practitioner, HOSAR
Instigated by: Date Instigated:	One Community Transformation Project Group / PID
Date Last Reviewed:	30 May 2024
Date of Next Review:	May 2027
Consultation:	Locality Matrons Service Managers Community Services CNG Community Services Business Meeting
Ratified and Quality Checked by: Date Ratified:	Kerry Brown - Clinical Lead (Community & Primary Care) 30 May 2024
Name of Trust Strategy / Policy / Guidelines this SOP refers to:	One Community Transformation

VALIDITY – All local SOPs should be accessed via the Trust intranet

CHANGE RECORD

Version	Date	Change details
1.0	27/08/2019	SOPs with separated as individual SOPs
1.1	July 2020	Change of author and minor amendments. Given 6 month extension to review date (until March 2024) - approved by director sign-off (Kerry Brown - 28/09/23).
1.2	21.02.2024	Reviewed. Approved at Community Services Clinical Network Group 21 February 2024 (21 February 2024).
1.3	30/05/2024	Minor amend. Removed reference to the i-STAT, as only i-STAT Allinity now in the community. Approved by sign-off (Kerry Brown - Clinical Lead – Community & Primary Care - 30 May 2024).

Contents

1. Introduction	3
2. Scope	3
3. Duties and Responsibilities	3
4. Procedures	4
4.1. Patient Referrals	4
4.2. Clinical Triage	4
4.3. Inclusion / Exclusion Criteria	4
5. Documentation	5
6. Long Term Oxygen Therapy (LTOT).....	5
7. Ambulatory Oxygen Therapy (AOT).....	7
8. Palliative Oxygen Therapy	8
9. Removal of Home Oxygen Therapy	9
9.1. First Review	10
9.2. Ongoing Review	10
9.3. Final Review	10
9.4. Procedure for Withdrawal of Home Oxygen Therapy in an event of a dispute between the patient and Oxygen Assessment and Review Services.....	11
10. Capillary Blood Gas Sampling.....	12
10.1. Responsibilities.....	12
10.2. Training Needs	12
10.3. Risk Assessments	12
10.4. Equipment Required.....	12
10.5. Operating Procedure	13
11. iSTAT Machine.....	13
11.1. HOS-AR - Capillary Sample Patient Preparation & Sample Requirements	13
11.2. Venous or Arterial Patient Preparation & Sample Requirements (Non-HOS-AR SERVICES)	14
11.3. ISTAT Quality Control Procedures and Criteria	14
11.4. Patient Attendance	15
11.5. Staff Wellbeing and Safety	15
11.6. Patient Feedback, Outcomes and Service Evaluation.....	15
12. References	16
Appendix A - Home Oxygen Referral Pathway	17
Appendix B - Community Services Single Point of Contact Referral Form	18
Appendix C - Smoking with Home Oxygen - Risk Management and MDT process	19
Appendix D - Initial Assessment – Ambulatory Oxygen/LTOT	20
Appendix E - LTOT Second Assessment	22
Appendix F - Initial Home Oxygen Risk Mitigation Form (IHORM) and Home Oxygen Consent Form (HO CF)	23
Appendix G - Manufacturer SOP (from Abbott)	25
Appendix H - LTOT Review	26
Appendix I - Ambulatory Oxygen Assessment.....	28
Appendix J - Ambulatory Oxygen Trial Diary.....	30
Appendix K - Ambulatory Oxygen Review.....	31
Appendix L - Oxygen Management Plan Documents (LTOT and AOT).....	33
Appendix M - Equality Impact Assessment	37

1. Introduction

Following the transformation work in 2022 to create a One Community approach, there has been a review of all community specialist services to ensure a standardised and equitable approach to patient care across the community. This document enables identification of the processes within each of the specialist services, aligned to commissioned service delivery, and bringing together all relevant processes and resources for the specialist service.

2. Scope

This standard operating procedure (SOP) outlines the role and responsibilities of the staff within The Scarborough, Ryedale and Whitby HOS-AR provided through Humber Teaching NHS Foundation Trust. This document also applies to students, bank or agency staff working within this service.

This service is provided across Scarborough Ryedale and Whitby and is part of the Trust's community respiratory services for the locality. Adult patients are assessed following referral from other health care professionals, and they can be seen in Malton or Whitby hospital, Scarborough community clinics or at home.

The purpose of the document aims to outline the rationale for home oxygen therapy and provided a comprehensive overview of how the service is run, standardise the initiation, prescribing and review of Long-Term Oxygen Therapy (LTOT) Ambulatory Oxygen Therapy (AOT) and Palliative oxygen therapy (POT)

The team follows the British Thoracic Society (BTS) guidelines for home oxygen use in adults. (2015) and the BTS Standards (2017).

3. Duties and Responsibilities

The Chief Executive: retains overall responsibility for ensuring effective implementation of all policies and procedures.

The Trust Board: will ensure that this standard operating procedure is acted on through delegation of implementation to Assistant Directors or equivalent General Managers/Service Managers/Modern Matrons/Lead Professionals.

Service Managers, Modern Matrons and Appropriate Professional Leads: will ensure dissemination and implementation of the policy within the sphere of their responsibility. They should also ensure staff are supported in attending relevant training and that time is dedicated to the provision and uptake of training and sign off competencies.

Charge Nurses / Team Leads: will disseminate and implement the agreed SOP. They will maintain an overview of associated training needs for their respective teams. The charge nurse/team leader will ensure mechanisms and systems are in place to facilitate staff to attend relevant training as part of their appraisal process to undertake training and sign off competencies.

- All clinical staff employed by the Trust will familiarise themselves and follow the agreed SOP and associated guidance and competency documents. They will use approved documentation and complete relevant paperwork as per policy and Standard Operating Procedures as relevant to each clinical activity. They will make their line managers aware of barriers to implementation and completion.

- All staff employed by Humber NHS Foundation Trust must work in concordance with the Safeguarding Multi-agency Policies and Procedures and local guidelines in relation to any safeguarding concerns they have for whom children or adults they are in contact.

4. Procedures

4.1. Patient Referrals

All referrals into the Scarborough, Ryedale and Whitby HOS-AR specialist service will be via the HTFT Community Single Point of Access (SPOC). Referrals are accepted from health care professional using the Single point of Contact (SPOC) referral form (Appendix B). This includes staff in primary and secondary care including GP's, nurses, acute inpatient teams, consultants.

The SPOC form should be submitted by electronic referral on SystmOne, emailed to hnf-tr.csspoc@nhs.net

4.2. Clinical Triage

Once the referral has been received it should be added by SPOC staff to the 'Triage – HOME OXYGEN inbox on SystmOne.

Once here, the referral should be triaged by the Specialist Respiratory Practitioner (Band 6 or 7). The referral should be either:

- Accepted, with the caseload reassigned to 'HOME OXYGEN– Scarborough / Ryedale / or Whitby' and an appointment scheduled within 4 weeks. The patient would then be sent an appointment letter– from S1 letter templates.
- Rejected as inappropriate based on the inclusion / exclusion criteria (see section 5)

If the referral does not meet inclusion criteria the referral would be ended, a letter would be sent to the referring clinician and patients GP.

- Reviewed – SPOC tasked to request further or supporting information from referrer (mandatory requirements for referral to follow) referral marked awaiting information.

Any incomplete forms will be rejected and returned to the referrer to complete appropriately.

4.3. Inclusion / Exclusion Criteria

Inclusion and exclusion criteria in line with NICE COPD in Adults Quality Standard (2023), NICE Clinical Guidelines for COPD (2018), British Thoracic Society (BTS) guidelines for home oxygen use in adults (2015) and the BTS Standards (2017).

Patient Group

Inclusion criteria

- Patients 18 years of age and over
- Patients with resting oxygen saturations $\leq 92\%$ on room air persistently when clinically stable (LTOT)
- Patients with oxygen saturations dropping $> 4\%$ on exertion (to $\leq 90\%$) (AOT) when clinically stable and active outside.
- Patients with clinical evidence of Polycythaemia (Haematocrit $> 55\%$) and/or Pulmonary Hypertension with resting oxygen saturations $\leq 94\%$ on room air persistently when clinically stable
- Palliative care patients
- Patients who are fully optimised with advice and appropriate medicines

Exclusion criteria

- Current smokers including e-cigarettes/vaping (Please refer to smoking cessation, reconsideration for oxygen when 3/12 smoke free) ref NICE 2023
- Patients condition not fully optimised.
- The service is not an emergency response service for patients who require oxygen therapy for acute episodes of illness
- Patients under 18 years of age

5. Documentation

Documentation will be completed as per [Community Services Assessment and Documentation SOP \(SOP22-007\)](#)

6. Long Term Oxygen Therapy (LTOT)

LTOT refers to the provision of home oxygen therapy for at least 15 hours in 24 hours for patients with chronic hypoxaemia (PaO₂ at or below 7.3kPa). The O₂ flow rate must be sufficient enough to raise the PaO₂ above 8kPa and not have a detrimental effect on the PaCO₂ (not raising it by 1kPa).

In addition, LTOT can be prescribed in chronic hypoxaemia and when a clinically stable PaO₂ is between 7.3kPa and 8kPa together with the presence of:

- Secondary polycythaemia
- Clinical and or echocardiographic evidence of pulmonary hypertension

Equipment

- Earlobe/finger probe oximeter
- Capillary Blood Gas equipment
- Blood gas analyser i STAT (Standard Operating Procedure for ISTAT Machine)
- Carbon monoxide monitors (Smokerlyzer)
- Examples of oxygen equipment

LTOT and AOT New Patients (Including ILD Patients)

Initial Appointment

- On arrival discussion with the patient explaining rationale for assessment and procedure to expected. It is important patient rests for 20 minutes on air.
- Completion of Initial Assessment Form (Appendix D)
- Check saturations at rest using ear lobe or finger probe oximeter if available. If oxygen saturations are well above criteria referral (92%) there is no need to proceed with LTOT assessment on that occasion.
- Evidence of diagnosis confirmed.
- Discussion re: smoking status and carbon monoxide reading taken. If the patient is smoking or there is evidence of smoking, they will be informed that we are unable to prescribe oxygen even if they meet the criteria. If current smoker the patient will be discussed with GP or respiratory consultant. A respiratory consultant referral would be actioned by GP if it is felt this is required.

Patient questioned re exacerbation status and symptom management, including chest clearance and exercise tolerance Exclude patient from assessment if evidence of recent exacerbation (6 -8 weeks).

- If indicated, capillary blood gas (CBG) taken as per Trust wide SOP
- Interpretation of CBGs
- pO₂ < 7.4 patient may meet criteria for LTOT but will need a second assessment in 3 weeks.
- pO₂ 7.4 - 8 repeat ABGs in three months (NB patients with Polycythaemia/Pulmonary Hypertension require second assessment in three weeks).
- pO₂ > 8 do not meet criteria for LTOT
- If pCO₂ above 6 patients should be given an Oxygen Alert Card, and venturi mask and written information. GP informed to create an alert on S1.
- If acidotic (i.e. Ph < 7.3) urgent discussion with medical colleagues in the acute and transfer will be arranged
- For ILD patients with no evidence of acute exacerbation to consider initiation of LTOT after 1st assessment.
- Assess suitable patients for Pulmonary Rehabilitation and discuss referral with them. Refer as appropriate.
- Triage to either LTOT or AOT assessment pathway

LTOT Second Appointment (After Three Weeks)

Procedure as above, completing LTOT second Assessment Form.:

- If patient meets criteria for LTOT:
- Begin delivering oxygen 2 L/min (1 L/min if evidence of CO₂ retention) to patient via nasal cannula and using an oxygen concentrator
- Repeat CBGs after 20 minutes
- Interpret CBG results:
- If pO₂ 8 and above patient meets criteria for LTOT
- If pO₂ <8 further titrate oxygen in increments of 1 L/min and repeat blood gas after 20 minutes. This may need to be done at a further appointment.
- If pCO₂ rises by 1 kPa patient may have clinically unstable disease and require further investigation
- If pO₂ 7.4 -8.0 kPa arrange repeat CBGs in three months
- HOOF B, Risk Mitigation (IHORM Appendix F) and Consent (HOOF Appendix F) forms discussed and completed with patient.
- Patient issued with individualised oxygen management plan (see Appendix L)& expected date for oxygen delivery and date for follow up
- HOOF B completed on Baywater Healthcare Online Portal
- Letter sent to GP and/or Referrer.
- SystemOne updated by HOS AR staff

LTOT Follow Up and Review

First review at home within 4 weeks. (This visit should highlight any potential risks and reinforce education and support. Compliance to be checked, smoking status, symptoms of hypercapnia and oxygen saturations on oxygen using ear lobe finger probe oximetry.

If carbon monoxide results show evidence of smoking (> 6ppm) then patients will be counselled about the ineffectiveness of LTOT, and the increased risks associated with smoking. The patient will be discussed with GP or respiratory consultant/ complex case manager/referrer. A respiratory consultant referral would be actioned by GP if it is felt this is required. Consider removal of oxygen (see Removal Procedure).

Record visit using LTOT Review Form. Appendix H). Copy to GP.

ALL INITIAL ASSESSMENTS SHOULD BE UNDERTAKEN BY APPROPRIATELY TRAINED BAND 6/7 RESPIRATORY PRACTITIONERS

SystemOne updated by HOS AR staff.

6 -12 monthly ongoing reviews in a variety of settings

Prior to review consult concordance report from Baywater portal:

- Compliance to be checked, smoking status, symptoms of hypercapnia and oxygen saturations on oxygen and on air (to ensure they still meet LTOT criteria) using ear lobe oximetry
- If carbon monoxide results show evidence of smoking (> 6ppm) then patients will be counselled about the ineffectiveness of LTOT, and the increased risks associated with smoking.
- The patient will be discussed with GP or respiratory consultant. A respiratory consultant referral would be actioned by GP if it is felt this is required. Consider removal of oxygen (see Removal Procedure- Section 8)
- Assess exacerbation status and symptom management. If patient currently unwell arrange further appointment in four weeks.
- CBG's taken at least yearly
- Record visit using LTOT Oxygen Review Sheet, (Appendix H) send copy to GP
- SystemOne updated by HOS AR staff
- (This review may be undertaken by the Respiratory Clinical Support Worker, Band 4 who will discuss outcomes /report any concerns with Respiratory Specialist colleagues)

7. Ambulatory Oxygen Therapy (AOT)

AOT refers to the provision of oxygen during exercise and activities of daily living.

It is not recommended in patients with chronic lung disease and mild hypoxaemia without exercise desaturation. Exercise desaturation is defined as a fall in SaO₂ of $\geq 4\%$ to a value of $\leq 90\%$

AOT should only be offered to patients already on LTOT if they are mobile outdoors. Ideally these patients would be referred to Pulmonary Rehabilitation where a formal assessment can take place demonstrating an improvement in exercise endurance.

REF BTS Guidelines for home oxygen use in adults 2015).

Patients meeting criteria for having AOT will have a trial of AOT and be given diary sheets to indicate usage. They will then be reviewed at four weeks.

AOT New Patients

Equipment

- Earlobe/ finger probe oximeter
- Capillary Blood Gas equipment
- Blood gas analyser i STAT (Standard Operating Procedure for ISTAT Machine) APPENDIX G)
- Carbon monoxide monitors (Smokerlyzer)
- Examples of oxygen equipment

On arrival discussion with the patient explaining rationale for assessment and procedure to expected. It is important patients rest for 20 minutes.

- Check saturations at rest using ear lobe oximeter if available.
- Evidence of diagnosis confirmed
- Discussion re smoking status and carbon monoxide reading taken. If the patient is smoking or there is evidence of smoking, they will be informed that we are unable to prescribe oxygen even if they meet the criteria.
- The patient will be discussed with GP or respiratory consultant. A respiratory consultant referral would be actioned by GP if it is felt this is required. Consider removal of oxygen (see Removal Procedure- Appendix L)
- Patient questioned re contraindications, exacerbation status and symptom management (APPENDIX I)
- Six Minute Walk Test (6MWT) performed on air as per protocol using AOT Assessment Form. :(APPENDIX I)
- Interpret results

If desaturation observed $\geq 4\%$ to $\leq 90\%$ MAY meet criteria for AOT

- If saturations remain around and above 90% or desaturation $< 4\%$, no AOT indicated
- If patient meets criteria as above patient shown options for AOT (this may include use of a conserver device) and decision made as to whether it would be appropriate for them
- Re affirm rationale for using AOT and ensure patient understands and would be willing and appropriate for a trial.
- Repeat 6MWT wearing oxygen at 2 L/min or appropriate level
- Interpret results, meets criteria for AOT if two or more of the outcomes achieved:
- If saturations maintained $> 90\%$
- If improvement in BORG score
- If improvement in distance walked
- If desaturation below 90% rest patient for 20 minutes and repeat 6MWT with an increased O₂ flow rate (increments for 2 L/min) until saturations are maintained around and above 90%
- HOOOF B, Risk Mitigation (IHORM) and Consent (HOOF) Appendix F forms discussed and completed with patient.
- AOT Activity Diary Sheet (Appendix J) given to assess concordance
- Patient leaves with individualised oxygen management plan (APPENDIX L)& an expected date for oxygen delivery and date for follow up
- HOOOF B completed on Baywater Healthcare Online Portal
- Letter sent to GP and/or Referrer
- Systmone updated by HOS AR staff

AOT Follow Up and Review

Evaluation of four-week trial at home

This visit should highlight any potential risks and reinforce education and support.

- Compliance to be checked, smoking status, symptoms of hypercapnia.
- If carbon monoxide results show evidence of smoking (> 6ppm) then patients will be counselled about the ineffectiveness of AO and the increased risks associated with smoking.
- The patient will be discussed with GP or respiratory consultant. A respiratory consultant referral would be actioned by GP if it is felt this is required.
- Consider removal of oxygen (see Removal Procedure -Appendix L)
- Check oxygen saturations on ambulatory oxygen during activity ideally over six minutes using ear lobe oximetry
- If desaturation occurs during activity, i.e. below 90%, increase flow rate and repeat walk test/activity.
- Activity diary sheets reviewed with patient
- Evaluate effectiveness of AOT on the patient's quality of life/exercise tolerance.
- If AOT not effective/patient using inappropriately/hindering activity levels decision made to remove AOT
- If AOT beneficial/used appropriately and patient happy to proceed, continue AOT and review in 3-6 months.
- Completion of Ambulatory Oxygen Review Form (APPENDIX L). Copy to GP.
- SystemOne updated by HOS AS staff

3 -6-month review in variety of settings

Prior to review consult concordance report from Baywater portal

This review should highlight any potential risks and reinforce education and support.

- Compliance to be checked, smoking status, symptoms of hypercapnia.
- If carbon monoxide results show evidence of smoking (> 6ppm) then patients will be counselled about the ineffectiveness of AO and the increased risks associated with smoking.
- The patient will be discussed with GP or respiratory consultant. A respiratory consultant referral would be actioned by GP if it is felt this is required. Consider removal of oxygen (see Removal Procedure- Appendix L).
- Assess exacerbation status and symptom management. If patient currently unwell arrange further appointment in four weeks.
- Check oxygen saturations on ambulatory oxygen during activity ideally over six minutes using ear lobe oximetry
- If desaturation occurs during activity, i.e. below 90%, increase flow rate and repeat walk test/activity.
- Evaluate effectiveness of AOT on the patient's quality of life/exercise tolerance.
- If AOT not effective/patient using inappropriately/hindering activity levels decision made to remove AOT
- Completion of Ambulatory Oxygen Review Form (APPENDIX L), copy to GP.
- SystemOne updated by HOS AS staff
- Adjust HOOB as necessary

(This three-month review may be undertaken by the respiratory clinical support worker, Band 4 who will discuss outcomes with respiratory practitioner colleagues)

8. Palliative Oxygen Therapy

The term palliative oxygen therapy (POT) refers to the use of oxygen to relieve the sensation of refractory persistent breathlessness in advanced disease or life limiting illness irrespective of underlying pathology where all reversible causes have been or are being treated optimally.

This process should be followed by all health care professionals in relation to the assessment and provision of palliative oxygen therapy if patients are eligible. This service is managed and delivered

by HTNHSFT (HOS-AR) team. This service only applies to adult patients with a registered GP within the Scarborough, Ryedale, and Whitby.
Patients who are not eligible include current smokers/vapers/e-cigarettes. An ex-smoker is classed as having abstained for at least 3 months.

Patient/family member/NOK are contacted within 3 working days of referral.
IF DEEMED URGENT THE HOS-AR WOULD ADVISE THE PALLIATIVE CARE TEAM OR GP ON THE HOOF A ordering process. HOOF A Guide

Patients are reviewed within their current dwelling to include home/hospital/hospice as their condition allows, by a member of the HOSAR team.

Patients are comprehensively assessed in relation to breathlessness, Spo2 and equipment suitability as per British Thoracic Society Guidelines for home oxygen use in adults (BTS 2015)

If deemed appropriate oxygen would be ordered by HOSAR team who complete risk assessment forms (IHORM) Home oxygen consent form (HOCF) Appendix F and relevant Home Oxygen order service (HOOF) forms. Providing an oxygen flow rate of 2-5L/min (BTS 2015)

Patients, their teams and/or families would be given education regarding use, safety, and self-management in relation to the palliative oxygen therapy.

Following installation of oxygen equipment patients are normally contacted by the HO-SAR within 72 hrs. Exclusion would occur at patients request.

HOSAR team contact details are supplied to all patients.

All palliative oxygen patients are routinely followed up annually post installation.

Amendments to patients' oxygen regimes can be requested by patients, families/carers, clinicians, and the wider MDT but can only be made by the HOSAR team.

If oxygen deemed inappropriate patients will be offered support and education by the HO-SAR team to include Nonpharmacological measures including breathing exercises, pacing techniques. Fan therapy and the need for opioids.

Baywater Healthcare Ltd, as the service provider, are responsible for the installation and maintenance of all oxygen equipment.

9. Removal of Home Oxygen Therapy

Reasons for Removal of Home Oxygen Therapy:

In line with the CCG Service Specification and the Regional Policy for Home Oxygen Safety, which are consistent with the latest BTS guidance REF BTS Guidelines for home oxygen use in adults 2015) and include:

- The need for explanation, patient education, and written information for patients
- The need for risk assessment in the patient's home by a suitably qualified professional
- The need to notify the oxygen supplier and fire safety services for additional risk assessment
- The fact that in some circumstances it may be appropriate to withhold or withdraw oxygen because it is no longer clinically indicated, not used appropriately or because of public safety and risk to others.

Removal of home oxygen should be considered in the following circumstances:

1. Oxygen is no longer clinically indicated - the patient is no longer receiving health benefits directly from the use of oxygen.
2. Oxygen is not used as prescribed.

3. Removal is required due to the safety risk to patient and the local population - there is clear evidence there is smoking on the premises where the oxygen is installed by the patient, other residents or visitors to the premises, or the patient fails a CO breath test

Clinical

For the purpose of this SOP safe removal of oxygen therapy is indicated when capillary blood gas indicates a pO₂ of ≥ 8.0 kpa breathing room air.

When the patient no longer meets the criteria for home oxygen and have been reassessed when in a stable clinical state, then the removal process should be initiated. It is good practice to determine this via capillary blood gas monitoring taken on two separate occasions, ensuring the patient remains above the criteria.

Patient Adherence

Patient Adherence

When patients do not use their prescribed oxygen for the recommended period of time necessary for clinical benefit. These patients should be advised of the importance of using their oxygen as prescribed and a period of time over which they are to improve their adherence should be agreed. If adherence does not improve during this period of time, then the oxygen may be removed.

Safety

- If a safety issue has been raised by the oxygen provider or a risk has been identified following completion of the risk assessment at a home review, then interventions that minimise the risk should be initiated.
- If the risk is identified as serious, such as fires involving oxygen, it may be necessary to remove the oxygen immediately.

9.1. First Review

- Obtain further capillary blood gas to confirm pO₂ remains above the criteria for requiring oxygen, ensuring the patient is eight weeks post exacerbation treatment. This should be performed no sooner than three weeks from the last capillary blood gas.
- If the patient remains above the criteria for oxygen, discuss and agree a weaning process to reduce the hours of oxygen use.
- Consider performing an ambulatory walk test on room air to identify or exclude significant desaturation on exercise.
- Draw up a written plan agreed by both clinician and patient to commence the weaning process (It is recognised that this is very much patient specific).
- Discuss appropriateness of non-pharmacological interventions for symptom management e.g. breathlessness management.
- Make appointment to follow up, to offer support and review the agreed care plan.

9.2. Ongoing Review

- Ensure home visit/telephone contact for support and review of patient's progress with weaning process. Aim for process to be completed within 3 months.
- For some patients it may not be possible to safely withdraw all oxygen therapy without increasing their level of anxiety and breathlessness or increasing the number of hospital admissions. In these cases, the weaning process will continue until the maximum reduction in their oxygen therapy usage can be achieved through joint patient and clinician working.

9.3. Final Review

- Measure oxygen saturations levels when in a clinically stable state (eight weeks post exacerbation treatment) to determine next process.
- If oxygen saturation levels are $>94\%$ on room air, then oxygen therapy is not required.
- If oxygen saturations are $<94\%$ or if there has been a long weaning process, consider a further capillary blood gas.

- If no oxygen is indicated and no further input required – discharge from the service and inform the fire service that oxygen has been removed from the property.
- Any patients that remain with oxygen therapy will require six-monthly reviews.
- It is recognised that there will be a number of patients already on oxygen for various reasons that refuse to have oxygen therapy withdrawn despite intensive support. For these patients, the service will consider the following actions:
 - Referral to Chest Physician for complete review.
 - Review current HOOF to reduce provision of oxygen (hours of use and modalities) to ensure their supply is as cost effective as possible.

9.4. Procedure for Withdrawal of Home Oxygen Therapy in an event of a dispute between the patient and Oxygen Assessment and Review Services

This policy is intended to support the process for withdrawal of home oxygen, in the event of a dispute between the patient and Oxygen Assessment and Review Services. (Appendix C)

Oxygen Removal Procedure

The Oxygen Assessment and Review Service should carry out the following Oxygen Removal Procedure if one of the above-mentioned circumstances persists, despite the patient and their carer being advised and supported to use the oxygen appropriately and despite actions taken to mitigate the risk and where the patient does not agree to the oxygen removal.

1. Identify the patient as qualifying for home oxygen removal because one or more of the circumstances described above have been met.
2. If the circumstances granting oxygen removal have been met, the decision not to remove home oxygen can be made in exceptional circumstances only. For example, in case of mitigating circumstances, including psychological risks, which indicate the need to continue using home oxygen despite the reasons for its removal or where the risk to others is deemed to be minimal and the patient, who is aware of the risk, decides to keep the oxygen at their own risk. In those circumstances, a signed disclaimer would need to be obtained from the patient with an expressed wish to keep the home oxygen, despite the risks.
3. Engage with the patient to ensure that they are informed about the reasons for the proposed oxygen removal and aware of safety risks if appropriate.
4. Work with other relevant professionals, especially the oxygen supplier and fire safety services to get a clearer and more consistent picture of the issues indicating oxygen removal.
5. Record all interventions carried out to improve adherence or reduce safety risks and the outcomes of their implementation.
6. Offer the patient psychological interventions, where appropriate.
7. Satisfy yourself that smoking cessation support by a recognised provider has been offered and refused or has been taken but there are concerns of non-compliance.
8. Carry out and document re-assessment undertaken with a view/intention to withdraw oxygen, including liaison with other relevant professionals, and complete a risk assessment.
9. If the patient still does not agree to the oxygen removal, give the patient written intention to remove home oxygen, the reasons for removal, information about the removal process and what the expected consequences of the removal are likely to be (increased breathlessness, long term complications and possible reduction in life span).
10. Inform the prescriber and patient's GP.
11. If the dispute has not been resolved, hold a case conference, inviting the patient, all healthcare professionals directly involved with the patient's care and other relevant professionals to make the final decision to remove home oxygen. The case conference should agree a care plan, including alternative treatment strategies, to be in place following the oxygen removal if appropriate. The senior clinician caring for the patient takes responsibility for supporting the outcomes of the updated care plan.
12. Where necessary, refer the case to the Trust Ethics Committee.

13. Inform the patient in writing about the outcomes of the case conference, including the updated care plan, and the next steps which will be taken to remove oxygen and all associated equipment from their home.
14. Inform the supplier to remove oxygen and all associated equipment. Where appropriate and with patient's consent, the oxygen equipment can be removed by the HOS-AR.

10. Capillary Blood Gas Sampling

Blood gas analysis allows clinicians to assess whether a patient has an acid-base disorder, or whether these systems are working properly to keep pH in the correct range. Capillary Blood Gas sampling (CBG) is used to routinely assess and review the need for home oxygen. Traditionally arterial blood gas (ABG) sampling would be performed. CBG sampling has several advantages over ABG sampling: it is relatively easy to obtain, patient's generally find it more acceptable as it is reasonably painless CBG sampling can be performed safely within a patient's home as less invasive than ABG sampling.

The purpose of this SOP is to provide guidance to staff on the correct technique for obtaining a CBG sample. This is to ensure that results obtained are accurate as well as ensuring all necessary infection control procedures are adhered to.

CBG sampling can be performed in both a clinic environment and a patient's own home.

This guidance is for use with adults on the HOSAR caseload for assessment and review of oxygen requirements. It is not to provide any guidance on the indication for and interpretation of the CBG sample.

10.1. Responsibilities

It is the clinician's responsibility to ensure local guidelines on Moving and Handling, Infection Control and safe disposal of sharps are adhered to when taking CBG samples.

It is the responsibility of the Clinical Lead to ensure that all staff taking CBG samples receive the appropriate training as well as completing the competency paperwork to ensure quality CBG sampling.

All staff carrying out CBG sampling must ensure the i-STAT has been quality controlled prior to processing any CBG samples.

See Appendix G.

10.2. Training Needs

Awareness and access to SOPs will form part of staff induction, and awareness will be raised with existing staff, including when changes have been made.

All staff that will be required to perform CBG sampling will receive in house training and competency assessments. Where possible, training will also be provided through the Association for Respiratory Technology and Physiology by means of completing the ARTP Certificate of Competence in Blood Gas Sampling and Analysis.

10.3. Risk Assessments

Refer to risk assessment completed for the use of hot water for obtaining an arterialised blood gas sample.

10.4. Equipment Required

- Heparinised Capillary tube
- ISTAT cartridge G3+
- ISTAT analyser
- ISTAT simulator
- Lancet or similar device e.g. heel click

- Hot water and bowl
- Gauze
- Gloves
- Sharps bin
- Blood sampling tray
- Clinell Wipes
- Plaster
- Tweezers

10.5. Operating Procedure

1. Heat gauze in freshly boiled water. Remove using tweezers and squeeze excess water from the gauze. Apply gauze to your own wrist and hold for 2 seconds. If the gauze is not too hot, apply to patient's wrist and hold for 2 seconds. Ask the patient if the temperature is tolerable. If they answer yes, apply the gauze to the patient's ear and ask again if the temperature is tolerable. Please note, the gauze must be as hot as the patient can COMFORTABLY tolerate.
2. The gauze will cool down, therefore repeat step 1 for 5-10 minutes and until the patient's ear is warm and red.
3. Refer to ISTAT manual for instructions on how to prepare the ISTAT analyser for testing as well as how to handle the ISTAT cartridges. - See Appendix G.
4. Use heel click or lancet to puncture earlobe, using folded gauze behind earlobe. Ensure good blood flow by repeating puncture immediately if necessary. Wipe initial blood away.
5. Hold the capillary tube horizontally to the earlobe to collect the blood. Slowly lower the tube to allow the blood to fill the tube. Fill the capillary tube with blood from the middle of the blood drop to prevent any air from getting into the capillary. Do not lower the tube too quickly to allow air to enter the tube. If this does happen, remove the air immediately by emptying the blood onto gauze until all the air has been removed.
6. It is important to fill the tube as quickly as possible, ideally within 30-60 seconds.
7. Fill the ISTAT cartridge with the blood from the capillary tube and insert into the analyser. See Appendix G.
8. Apply pressure with gauze to the puncture site until bleeding has stopped.
9. Apply a small plaster to the puncture site.
10. Dispose of all waste appropriately and clean all equipment with Clinell wipes.

11. iSTAT Machine

The iSTAT instrument is a portable analytical, in vitro, diagnostic device utilising single use iSTAT cartridges containing electrodes and sensors to perform quantitative testing on whole blood. The test cartridges are filled with two or three drops of blood and inserted into the instrument. The instrument carefully monitors and controls the test process, including running internal quality checks to ensure quality of the cartridge. The iSTAT uses micro-fabricated electrochemical sensors located in the iSTAT single-use disposable cartridges. The cartridges are able to measure blood gases and electrolytes. This is mainly achieved by the lungs (which excrete CO₂), and kidneys (which excrete or reabsorb H⁺ and bicarbonate).

11.1. HOS-AR - Capillary Sample Patient Preparation & Sample Requirements

Capillary whole blood should be taken in a balanced heparin capillary tube.
Fill cartridge immediately after collection.

RUNNING A PATIENT TEST PROCEDURAL STEPS – Please refer to ABBOT manufacturer's SOP (see Appendix G).

Samples should be discarded as clinical waste following analysis.

Tasks, Responsibilities and Authorisations

These procedures must only be carried out by staff members who have received face-to-face iSTAT blood gas analyser training with POCT or with a link trainer and completed competency paperwork.

11.2. Venous or Arterial Patient Preparation & Sample Requirements (Non-HOS-AR SERVICES)

Samples should be capped to maintain anaerobic conditions and thoroughly mixed immediately after collection and again prior to sampling to prevent formation of small clots and ensure homogenous samples.

Sample volume 65uL

Venous or Arterial whole blood should be taken in a dry, balanced heparin blood gas syringe or capillary tube.

Fill cartridge within 10 minutes of collection.

Venous samples can also be collected in a lithium heparin tube.

Fill cartridge within 10 minutes of collection.

Capillary whole blood should be taken in a balanced heparin capillary tube.

Fill cartridge immediately after collection.

When using CG4+ cartridges for blood gas and lactate the cartridge **MUST** be filled immediately.

Samples should be fully labelled and transported safely in a sample tray.

Filling cartridge directly from skin puncture is not recommended.

Samples should be discarded as clinical waste following analysis.

RUNNING A PATIENT TEST PROCEDURAL STEPS – Please refer to ABBOT manufacturer's SOP (see Appendix G).

11.3. ISTAT Quality Control Procedures and Criteria

Calibration

The instrument houses the mechanical and electrical systems necessary to control fluid movement within the cartridge, control the temperature, measure barometric pressure, measure electrical signals generated by the sensors, and display and transmit results. The instrument's functions are factory calibrated to specifications that are programmed into the instrument along with acceptability limits, which, when exceeded, cause the instrument to display quality check messages, or to display *** rather than results. The internal simulator functions as a signal-checking mechanism on every cartridge inserted.

A one-point calibration is automatically performed as part of the test cycle on each cartridge type, except coagulation and immunoassay cartridges. Operator intervention is not necessary. The calibrant solution is automatically released from its foil pack and positioned over the sensors. The calculation of the result is equivalent to reading the sample's concentration from an adjusted calibration curve.

Quality Control

1. The iSTAT automatically runs quality checks of analyser and cartridge performance each time a sample is tested. The internal quality control will suppress results if these do not meet certain internal specifications.
2. The **monthly** Electronic Simulator Check is performed by APPROPRIATELY trained staff within each service at HTNHSFT. It provides an independent check on the ability of the instrument to take accurate and sensitive measurement of voltage, current and resistance from the cartridge. To perform the Electronic Simulator, check Please refer to ABBOT manufacturer's SOP (see Appendix G). In the case of 'Fail' please repeat the Electronic Simulator Check, then try a different Electronic simulator– if the failure is persistent report to Abbott. The Electronic Simulator Check should also be performed if the meter is dropped. It is

also performed following the 6 monthly Software/CLEW updates OR uploaded by ABBOT TECHNIAN. (HOS-AR ONLY)

3. The **monthly** Liquid control QA is performed by APPROPRIATELY trained staff within each service at HTNHSFT. The liquid solutions are used to verify the integrity of each batch of cartridges that are issued for use from ABBOT and are also analysed monthly on each meter. Liquid controls are: • TriControl Level 1: 5P7101 • Tricontrol Level 3: 5P7301. To perform the Electronic Simulator, please refer to ABBOT manufacturer's SOP (see Appendix G). Quality control results are compared automatically against the eVAS (electronic Value Assignment). If QC fails. Please re-run QC with fresh control and fresh cartridge or refer to senior OR POCT at YSNHSFT for guidance.
4. External Quality Assurance (EQA). The monthly EQA is performed by APPROPRIATELY trained staff within each service at HTNHSFT. The meters are enrolled in monthly RIQAS blood gas EQA scheme as per accreditation guidelines. this must be run at MONTHLY intervals to ensure the i-STAT 1 is functioning correctly. To perform, please follow the below steps as per manufacturers SOP (see Appendix G). Humber ISTAT MACHINES EQA are under governance of YSTHNHSFT POCT.

POCT will receive and review EQA reports for iSTATS used in the HOS-AS service and will evidence this and any actions taken and discussed with the HOS-AR

5. CLEW/iOS UPDATE. This software must be downloaded to the device bi-annually. This can be done via USB or via the Abbott managed cloud OR uploaded by ABBOT TECHNIAN. (HOS-AR ONLY) to perform, please follow the below steps as per manufacturers SOP (see Appendix G).

All QC results must be stored securely FOR HOSAR ONLY enter onto the ISAT control data base and store on THE V Drive V:\PCC\S&R - Specialist Services\Private\Home Oxygen Service S&R&Wi-STAT Control

These procedures must only be carried out by staff members who have received face-to-face iSTAT blood gas analyser training with POCT at YSTHNHSFT or with a link trainer and completed competency paperwork.

11.4. Patient Attendance

The HTFT SOP for patients not attending appointments must be followed:

[Primary Care - DNA SOP21-010](#)

11.5. Staff Wellbeing and Safety

The Trust policy on lone working must be followed:

[Lone Worker Policy F-004](#)

11.6. Patient Feedback, Outcomes and Service Evaluation

This service has the following processes for evaluating and improving patient care:

Friends and Family Test (FFT)– This service FFT code is – TEAM CODE SCO17

The process for distributing FFT is issuing patients with paper copy or web address following initial assessment and at ongoing review.

The service reviews FFT information at regular team meetings

12. References

BTS (2015) British Thoracic Society guidelines for home oxygen use in adults:
<https://www.brit-thoracic.org.uk/document-library/guidelines/home-oxygen-for-adults/bts-guidelines-for-home-oxygen-use-in-adults/>

BTS (2017) Home Oxygen Quality Standards for home oxygen use in adults:
<https://www.brit-thoracic.org.uk/document-library/quality-standards/home-oxygen/bts-home-oxygen-quality-standards/>

Chronic obstructive pulmonary disease in adults. London: National Institute for Health and Care Excellence (2023). Available from: <https://www.nice.org.uk/guidance/gs10>

Global Strategy for Prevention, Diagnosis and Management of COPD: 2023 Report. GLOBAL (2023). Report. Available at: <https://goldcopd.org/2023-gold-report-2/>

[National POCT Guidance 2023](#)

Home Oxygen Referral Pathway

Community Respiratory Service

Long Term Oxygen Therapy (LTOT)

Consider referral when evidence of:

- Resting SpO₂ on 2 occasions ≤ 92% or ≤ 94% (Polycythaemia / Pulmonary HTN)

Ambulatory Therapy (AOT)

Consider referral when evidence of:

- Exercise desaturation (SpO₂ <90% or SpO₂ drop >4%)
- Require oxygen outside of the home

Palliative Oxygen Therapy (POT)

Consider referral when evidence of:

- Symptomatic patient with SpO₂ 92%<

GP -Please complete HOOF A if patient need is deemed urgent.

COMPLETE SPOC REFERRAL FORM

When all sections are completed, please send using electronic referral via SystmOne or email to hnf-tr.csspoc@nhs.net

It is recommended that patients are assessed for LTOT / AOT 8 weeks post exacerbation.

However, if commenced on hospital discharge, please advise patients of this 8-week timescale for community review and refer via SPOC Form.

For patients discharged from hospital / hospice on Palliative Oxygen Therapy:

Complete SPOC referral form only if a telephone call from the HOSAR following installation is required.

SINGLE POINT OF CARE
Tel: 01653 609609

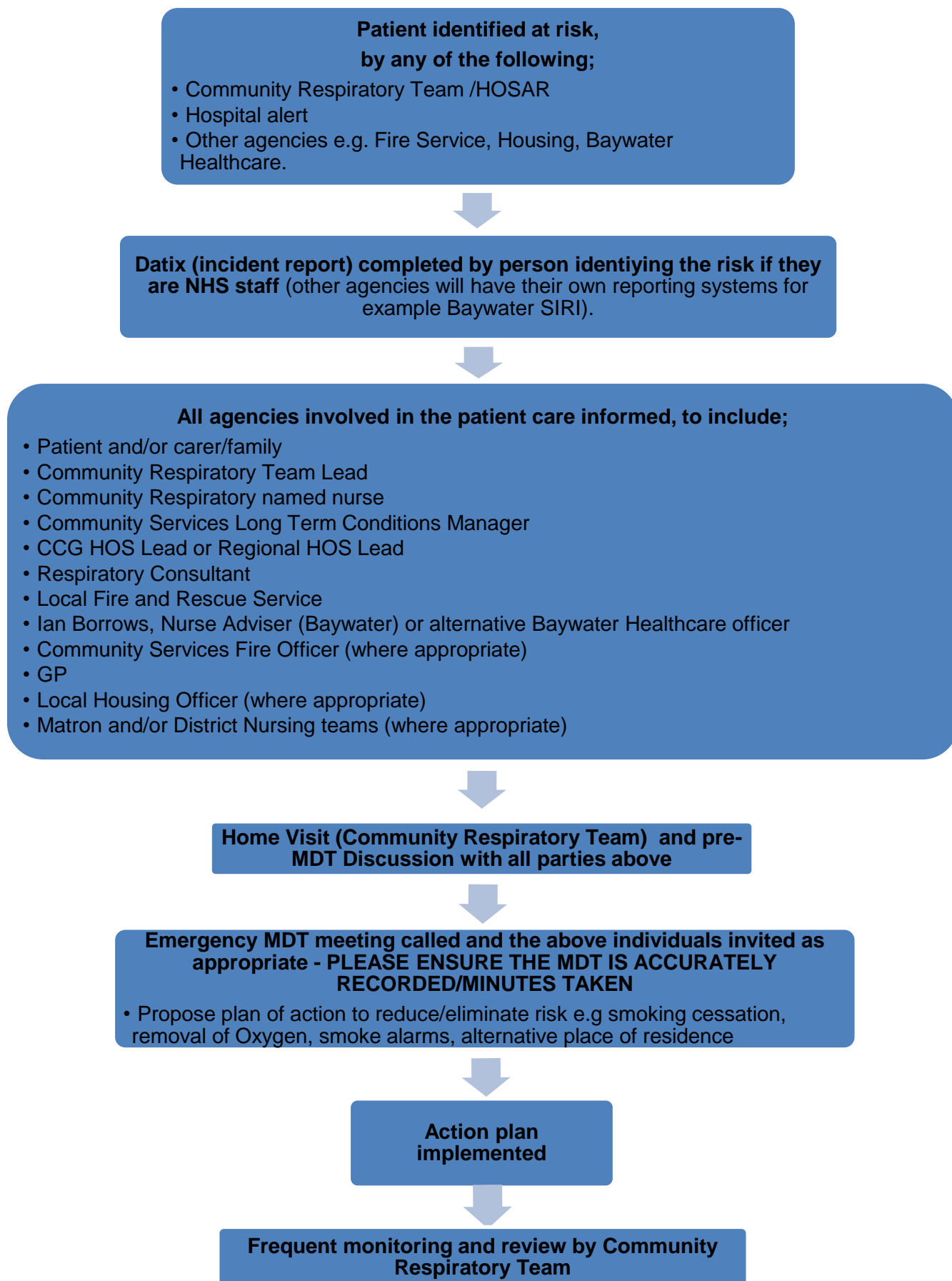
Caring, Learning and Growing



Appendix B - Community Services Single Point of Contact Referral Form

[Community Services - Single Point of Contact Referral Form](#)

Appendix C - Smoking with Home Oxygen - Risk Management and MDT process



Appendix D - Initial Assessment – Ambulatory Oxygen/LTOT

Name:	Date:
NHS:	<input type="checkbox"/> Consent to assess
DOB:	<input type="checkbox"/> Consent to info sharing
Age:	

Subjective History: PC / Diagnosis HPC / Reported Symptoms Any symptoms of nocturnal dyspnoea?	
Has the patient recently been treated for a chest infection or exacerbation?	Yes / No (If < four weeks needs new date for assessment)
PMH:	
Drug History (list or attach summary): Respiratory Medication Optimised? Yes / No Recommendations?	
Inhaler technique checked?	
Smoking status (If patient current smoker or quit in $\leq 3/12$ <u>not</u> eligible for oxygen – refer to smoking cessation) Smokerlyzer result Referral to smoking cessation	Yes No
Signature:	Date:
Role: Specialist Respiratory Practitioner	Time:

Initial Assessment (continued)

Name: NHS: DOB:
--

Social History:		Mobility:	
		Falls within last 6/12? Yes / No Details:	
SpO ₂ @ rest	HR	BP	Temp
CBGs PO ₂ < 7.4 may meet criteria (Need second visit in 3/52) PO ₂ 7.4-8 repeat in 3/12 (patients with pulmonary hypertension or polycythaemia need second visit in three weeks) PO ₂ >8 do not meet criteria PCO ₂ >6 give oxygen alert card PH <7.3 discuss with medical colleagues		pO ₂ pCO ₂ pH HCO ₃ BE SpO ₂	
Pulmonary Rehab Referral		Yes	No
Chest Clearance Regimen?			
Any devices used?			
Any referrals to be completed?			
Comments:			
Outcome / Plan:			
Date of second Assessment (Titration)			
Signature:		Date:	
Role: Specialist Respiratory Practitioner		Time:	

Appendix E - LTOT Second Assessment

Name: NHS: DOB:	Age:	Date: <input type="checkbox"/> Consent to assess
--	-------------	---

	COMMENTS	
Any change since initial assessment?		
Has the person been treated for a chest infection or exacerbation since the 1 st assessment?		
Evidence of smoking	Yes / No	
Smokerlyzer result		
SpO2 at rest		
CBGs PO2 < 7.4 meets criteria PO2 7.4-8 repeat in 3/12 (patients with pulmonary hypertension or polycythaemia need second visit in three weeks) PO2 >8 do not meet criteria PCO2 >6 give oxygen alert card PH <7.3 discuss with medical colleagues	pO2 pCO2 pH	HCO3 BE SpO2 If criteria met start oxygen at 2 L/min (1 L/min if CO2 retention)
CBGs after 20mins PO2 8 and above meets criteria PO2 <8 titrate up 1L/min & recheck CBG's after 20 mins	pO2 pCO2 pH	HCO3 BE SpO2
Comments:		
Patient meets criteria for LTOT	YES / NO	
Safety Checklist: <input type="checkbox"/> No Smoking / Naked Flames <input type="checkbox"/> No Cooking <input type="checkbox"/> No Slips, Trips, Falls <input type="checkbox"/> No Oil Based Skincare <input type="checkbox"/> No Open Heat Sources <input type="checkbox"/> Care with Air		
Mattress		
IHORM and IHCF completed	<input type="checkbox"/>	
Provided BLF Oxygen Therapy information booklet	<input type="checkbox"/>	
Appointment for review in 4 weeks	<input type="checkbox"/> Booked - Date:	
HOOF B Completed Online	<input type="checkbox"/>	
Signature:	Date:	
Role: Specialist Respiratory Practitioner	Time:	

Appendix F - Initial Home Oxygen Risk Mitigation Form (IHORM) and Home Oxygen Consent Form (HOCF)

Initial Home Oxygen Risk Mitigation Form (IHORM) and Home Oxygen Consent Form (HOCF)

BOTH FORMS MUST BE COMPLETED AND SIGNED BEFORE OXYGEN CAN BE INSTALLED.
DO NOT SEND FORMS TO SUPPLIER FORMS WILL BE PLACED IN PATIENT NOTES
THERE ARE CONFIRMATION BOXES ON THE HOME OXYGEN ORDER FORMS.

Oxygen can pose a risk of harm to the user and others in the event of fires, falls and inability to use complex equipment. The initial identification and onward communication of these risks is the responsibility of the health care professional ordering the oxygen and remains so until that prescription ceases or is superseded. The table below reflects risk factors that are based on evidence of real life serious and untoward incidents, 90% of which are smoking, and e-cigarette/charger related.

The Initial Home Oxygen Risk Mitigation (IHORM) is to be completed in conjunction with the Home Oxygen Consent Form (HOCF) prior to oxygen being ordered from the oxygen supplier via the Home Oxygen Order Form (HOOF). **It is the responsibility of the registered health care professional who is gaining consent to complete and add the IHORM with the HOOF and HOCF to the patient's notes. If all documents are not confirmed as being completed in full the Home Oxygen Order cannot be fulfilled.**

If the risks identified on the IHORM indicate significant levels of risk the patient should be discussed directly with the local Home Oxygen Service or Clinical Oxygen Lead for a full risk assessment prior to oxygen being ordered as recommended in the British Thoracic Home Oxygen Guidelines June 2015. **Regardless of risk or diagnosis all adult patients should be referred the Home Oxygen Assessment and Review Service (HOS-AR) for the team to determine next steps if deemed relevant.**

If any responses below fall within a shaded box, please refer to the Required Action column and supporting notes.

All actions should be explained to the patient and why they are being taken in line with service contracts. Ensure that both verbal and written information has been given to the patient or their representative.

Patient Name		DOB	
Address		Oxygen requested?	Yes - Sending HOOF No - Risk is too high
Recorded at	please circle Hospital Clinic / Home / other location	NHS No	
Risk Level	Risks	No	Yes
HIGH	Does the patient smoke cigarettes / e-cigarettes?		
	Have they smoked in the last 6 months? Quit date.....		
	Does anyone else smoke at the patients premises?		
	A recent history of drug or alcohol dependency?		
	Patient reported they have had a fall in the last 3 months?		
	Have they had previous burns or fires in the home?		
	Does the person have identified mental capacity issues?		
MODERATE	Can the patient leave their property un-aided?		
	Is the patient or any dependents/ in the property vulnerable? E.G. disabilities/ children		
	Do they live in a home that is joined to another?		
	Patient reports they have working smoke alarms at home? (If unknown please state no)		
	Do they live in a multiple occupancy premises (Bedsit/flat)		

Mitigation actions taken e.g. contacted falls team Referred to Fire and Rescue

Declaration I confirm that I am the healthcare professional responsible for the care of this patient. I have discussed the risks listed on this form with the patient/carer/ guardian (delete as necessary) and from the responses given Oxygen can/cannot (delete as necessary) be requested at this time.

Clinicians Signature		Profession	
Print Name		HOS team	
Contact No.		Date	
Lead Consultant is			

Patient agreement to sharing information



Form issued by:			
Unit/Surgery		Address	
Contact name			
Tel no.			
Email			

Patient			
Name		Address	
D.O.B.			
NHS number			
Tel/mobile no.			
E-mail		(Only include if the patient agrees to email contact)	

My doctor or a member of my care team has explained the arrangements for supplying Oxygen at my premises, that my personal information will be managed and shared in line with the Data Protection Act 1998, Human Rights Act 1998, and common law duty of confidentiality and I understand these arrangements, such that:

1. Information about my condition/condition of the patient named above* will be provided to the Home Oxygen Service (HOS) Supplier to enable them to deliver the Oxygen treatment as per the Home Oxygen Order Form (HOOF).
2. The HOS Supplier will be granted reasonable access to my premises, so that the Oxygen equipment can be installed, serviced, refilled, and removed (as appropriate).
3. Information will be exchanged between my hospital care team, my doctor, the home care team, and other teams (e.g. NHS administration) as necessary related to the provision, usage, and review, of my Oxygen treatment, and safety.
4. Information will also be shared with the local Fire Rescue Services team to allow them to offer safety advice at my premises and where appropriate install/deliver suitable equipment for safety.
5. Information will also be shared with my electricity supplier/distributor where electrical devices have been installed.
6. From time to time, I may be contacted to participate in a patient satisfaction survey/audit. (delete *should you wish not to participate*)
7. I understand that I may withdraw my consent at any time (at which point my HOS equipment will be removed).

* Delete as applicable

Patient's signature		Date	
(See note 4 where signed and witnessed on patient's behalf)			

I confirm that I have responsibility for the above-named patient e.g. parental responsibility, lasting power of attorney.

Signature		Name	
Relationship to patient		Date	

I confirm that I am the healthcare professional responsible for the care of this patient and I have completed this form on his/her behalf as s/he is unable to provide/withhold consent. The patient has been given a copy of this form.

Clinician's signature		Date	
Name			

Appendix G - Manufacturer SOP (from Abbott)

[i-Stat Alinity](#)

Appendix H - LTOT Review

Name: NHS: DOB:	Age:	Date: <input type="checkbox"/> Consent to assess
		COMMENTS
How many hours is patient using O2 as LTOT and what equipment in situ		
Check concentrator settings and ensure that it is at prescribed rate.		
Check ambulatory usage and flow setting. Check patient can adjust flow rate if appropriate <i>(Consider liquid/portable concentrator if indicated)</i>		
How many ambulatory cylinders?		
Frequency of deliveries?		
Check conserver setting if used and patient triggering		
How much activity is patient undertaking? <i>(Consider repeat walk tests/re-titration if activity increased or clinical deterioration.)</i>		
Any falls within past 12 months. Consider referral to falls team if indicated		
How is patient getting on with equipment? <i>Changing cannula monthly or after exacerbation?</i>		
Has patient had any morning headaches, drowsiness, or resting tremor ('flap') on oxygen?		
When did the patient last have antibiotics?		
How often is patient requiring AB or OS		
Any evidence of exacerbation today		
Has the patient had any new ankle swelling or more than usual?		
Signature:		Date:
Role: Specialist Respiratory Practitioner		Time:

LTOT Review (continued)

<p>Name:</p> <p>NHS:</p> <p>DOB:</p>

<p>Check smoking status (document smokerlyzer result) Education on conflict of O2 and smoking. Refer to Smoke Cessation</p>	
Resting SpO2 on air	HR
SpO2 on LTOT (<i>CBGs if undertaken</i>)	pO2 HCO3
	pCO2 BE
Action taken?	pH SpO2
Any Other Problems?	
Nasal Soreness	Ear Soreness
Nutrition and weight	
Any referrals to be completed?	
<p>Safety Checklist: <input type="checkbox"/> No Smoking / Naked Flames <input type="checkbox"/> No Cooking <input type="checkbox"/> No Slips, Trips, Falls</p> <p><input type="checkbox"/> No Oil Based Skincare <input type="checkbox"/> No Open Heat Sources <input type="checkbox"/> Care with Air</p> <p>Mattress</p>	
Comments:	
Outcome / Plan	
Signature:	Date:
Role: Specialist Respiratory Practitioner	Time:

Appendix I - Ambulatory Oxygen Assessment

Six-Minute Walk Test

Name:	Last Bronchodilator:
NHS Number:	SpO2 at rest:
DOB:	BP:
Age:	Pulse:
Clinic Date:	Borg Dyspnoea Score at rest:
<input type="checkbox"/> Consent to participate in assessment	Walking Aid:
CONTRAINDICATIONS	
<input type="checkbox"/> Resting bp systolic <180 / diastolic <100	<input type="checkbox"/> No evidence of smoking
<input type="checkbox"/> Resting heart rate <120bpm	<input type="checkbox"/> No unstable angina in previous month
	<input type="checkbox"/> No myocardial infarct in previous month

<input type="checkbox"/> Explain object of test is to walk as far as possible in 6 mins (see script) Criteria: Desat >4% to SpO2 <90% = retest with O2 Maintain SpO2 ≥90% or desat <4% = No O2	Test 1 Time:	Test 2 Time:
	Tally	Tally
	Distance	Distance
	On Room Air	Supplemental O2
O2 Saturations (SpO2)	Baseline	
	Lowest	
	End	
Pulse Rate (bpm)	Baseline	
	Highest	
	End	
Rest Stops	Time	
	SpO2	
	Pulse Rate	
	Length of Rest Stop	
	Total Number of Rest Stops	
Recovery to Baseline (End of Test)	Time Taken	
	End SpO2	
	End Pulse Rate	
Borg Dyspnoea Score	Pre-Test	
	Post Test	
Signed:	Date:	
Role: Specialist Respiratory Practitioner	Time:	

Ambulatory Oxygen Assessment (continued)

Name:
NHS:
DOB:

Patient qualifies for ambulatory oxygen due to supplementary oxygen resulting in an improvement in (circle all that apply):

Distance Mobilised SpO2 Borg Score

**Explain different oxygen options available to patient
(Transportable / Portable Concentrator, Standard / Lightweight Cylinders)**

Equipment to order for patient:

.....
.....
.....
.....
.....

Safety Checklist: **No Smoking / Naked Flames** **No Cooking** **No Slips, Trips, Falls**
 No Oil-based Skincare **No Open Heat Sources** **Care with Air Mattress**

IHORM and HOCF discussed, completed & signed with patient

AO Diary Sheet issued to patient (informed to complete for 2/52)

BLF Oxygen Therapy booklet provided to patient with HOSAR contact details

For Office Use

HOOF B Completed on Baywater Website

Signed:	Date:
Role: Specialist Respiratory Practitioner	Time:

Appendix J - Ambulatory Oxygen Trial Diary

Name: _____

Flow Rate: _____

NHS Number: _____

Start Date: _____

	Times ambulatory oxygen used today?	Time ambulatory oxygen used to leave the house today?	Time ambulatory oxygen was used around the house today?	Did the ambulatory oxygen help with activities today? (Yes / No)	Did the ambulatory oxygen help control your breathlessness? (Yes / No)	Comments (e.g. reason for using ambulatory oxygen, problems encountered)
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

Appendix K - Ambulatory Oxygen Review

Name:	Date:
NHS:	<input type="checkbox"/> Consent to assess
DOB:	Age:

	COMMENTS
Equipment in place providing ambulatory support (Type and number of cylinders, concentrator, static cylinders)	
Frequency of ambulatory deliveries	
How many hours/day is patient using O2 therapy	
Concordance issues / is use of oxygen appropriate? <i>(Review of ambulatory diary sheets if available)</i>	
Check ambulatory flow setting. Check patient can adjust if necessary. <i>(Consider liquid/portable concentrator if indicated)</i>	
Check conserver setting if used and patient triggering OK.	
How is patient getting on with equipment? <i>Changing cannula monthly or after exacerbation?</i>	
Has patient had any morning headaches, drowsiness, or resting tremor ('flap') on oxygen?	
When did the patient last have antibiotics? How often is patient requiring AB or OS	
How is patient feeling today? <i>(Assess for early signs of exacerbation)</i>	
Has the patient had any ankle swelling or more than usual?	
Signature:	Date:
Role: Specialist Respiratory Practitioner	Time:

Ambulatory Oxygen Review (continued)

Name:
NHS:
DOB:

Resting Borg Score	HR	BP
Resting SpO2 on air (<i>resting SpO2 < 93% perform CBGs</i>)		
Blood gases on air (<i>CBG's if undertaken</i>)	pO2	HCO3
	pCO2	BE
	pH	SpO2
Mobilise patient on oxygen: SpO2 and oxygen used Borg Score Recovery time		
Check smoking status and do Smokerlyzer test if applicable Education/conflict of O2 and smoking if indicated	Smoker / ex-smoker / never smoked CO ppm	%COHb
Any falls within past 12 months? Consider referral to falls team if indicated		
Nasal soreness?	Ear soreness?	
Nutrition and Weight		
Any other problems?		
Any referrals to be completed?		
Safety Checklist: <input type="checkbox"/> No Smoking / Naked Flames <input type="checkbox"/> No Cooking <input type="checkbox"/> No Slips, Trips, Falls <input type="checkbox"/> No Oil-based Skincare <input type="checkbox"/> No Open Heat Sources <input type="checkbox"/> Care with Air Mattress		
Comments:		
Outcome / Plan:		
Signature:	Date:	
Role: Specialist Respiratory Practitioner	Time:	

Home Oxygen Service
SPOC 01653 609609
NHS 111/999



Humber Teaching
NHS Foundation Trust

Oxygen Management Plan

Patient Name:

DOB: NHS:

My Ambulatory Oxygen Prescription:

Ambulatory Oxygen flow rate to be used for
activity only

Please do not use your oxygen at rest

Oxygen equipment ordered:

.....
.....
.....

*** Be aware of any signs / symptoms of carbon dioxide retention:**

**Confusion or feeling muddled
Involuntary movements**

**Drowsiness
Morning headaches**

**IN THE EVENT OF EXPERIENCING ANY OF THESE SYMPTOMS
CONTACT YOUR HEALTH CARE PROVIDER**

Home Oxygen Service

SPOC 01653 609609

NHS 111/999



Humber Teaching
NHS Foundation Trust

Oxygen Management Plan

Patient Name:

DOB: **NHS:**

My LTOT Prescription:L/min

LTOT (long term oxygen therapy)
to be used for 15hrs per day+

My Ambulatory Oxygen Prescription:

Ambulatory Oxygen flow rate to be used for
activity only

Oxygen equipment ordered:

.....

.....

.....

*** Be aware of any signs / symptoms of carbon dioxide retention:**

Confusion or feeling muddled

Drowsiness

Involuntary movements

Morning headaches

**IN THE EVENT OF EXPERIENCING ANY OF THESE SYMPTOMS:
CONTACT YOUR HEALTH CARE PROVIDER**

Home Oxygen Service

SPOC 01653 609609

NHS 111/999



Humber Teaching
NHS Foundation Trust

Oxygen Management Plan

Patient Name:

DOB: NHS:

My LTOT Prescription:L/min

LTOT (long term oxygen therapy)
to be used for 15hrs per day+

Oxygen equipment ordered:

.....
.....
.....

*** Be aware of any signs / symptoms of carbon dioxide retention:**

Confusion or feeling muddled

Drowsiness

Involuntary movements

Morning headaches

**IN THE EVENT OF EXPERIENCING ANY OF THESE SYMPTOMS:
CONTACT YOUR HEALTH CARE PROVIDER**

Home Oxygen Service

SPOC 01653 609609

NHS 111/999



Humber Teaching
NHS Foundation Trust

Oxygen Management Plan

Patient Name:

DOB: **NHS:**

My Oxygen Prescription:

Oxygen to be used for symptom management & recovery after activity.

Please do not use your oxygen for long periods at rest

Oxygen equipment ordered:

.....

.....

.....

*** Be aware of any signs / symptoms of carbon dioxide retention:**

Confusion or feeling muddled

Drowsiness

Involuntary movements

Morning headaches

**IN THE EVENT OF EXPERIENCING ANY OF THESE SYMPTOMS
CONTACT YOUR HEALTH CARE PROVIDER**

Appendix M - Equality Impact Assessment

For strategies, policies, procedures, processes, guidelines, protocols, tenders, services

1. **Document or Process or Service Name:** Scarborough, Ryedale and Whitby Home Oxygen Service and Review (HOS-AR)
2. **EIA Reviewer (name, job title, base, and contact details):** Liz Hudson - Specialist Respiratory Practitioner
3. **Is it a Policy, Strategy, Procedure, Process, Tender, Service or Other?** SOP

Main Aims of the Document, Process or Service
Please indicate in the table that follows whether the document or process has the potential to impact adversely, intentionally or unwittingly on the equality target groups contained in the pro forma

Equality Target Group 1. Age 2. Disability 3. Sex 4. Marriage/Civil Partnership 5. Pregnancy/Maternity 6. Race 7. Religion/Belief 8. Sexual Orientation 9. Gender re-assignment	Is the document or process likely to have a potential or actual differential impact with regards to the equality target groups listed? Equality Impact Score Low = Little or No evidence or concern (Green) Medium = some evidence or concern (Amber) High = significant evidence or concern (Red)	How have you arrived at the equality impact score? a) who have you consulted with b) what have they said c) what information or data have you used d) where are the gaps in your analysis e) how will your document/process or service promote equality and diversity good practice
--	--	--

Equality Target Group	Definitions	Equality Impact Score	Evidence to support Equality Impact Score
Age	Including specific ages and age groups: Adult services Older people	Low	No bearing on treatment Incorporate adaptations to support patients needs
Disability	Where the impairment has a substantial and long-term adverse effect on the ability of the person to carry out their day to day activities: Sensory Physical Learning Mental health (Including cancer, HIV, multiple sclerosis)	Low	No bearing on treatment Incorporate adaptations to support patients needs
Sex	Men/Male Women/Female	Low	No bearing on treatment
Marriage/Civil Partnership		Low	No bearing on treatment
Pregnancy/Maternity		Low	No bearing on treatment
Race	Colour Nationality Ethnic/national origins	Low	No bearing on treatment
Religion or Belief	All religions Including lack of religion or belief and where belief includes any religious or philosophical belief	Low	No bearing on treatment
Sexual Orientation	Lesbian Gay men Bisexual	Low	No bearing on treatment
Gender Reassignment	Where people are proposing to undergo, or have undergone a process (or part of a process) for the purpose of reassigning the person's sex by changing physiological or other attribute of sex	Low	No bearing on treatment

Summary

Please describe the main points/actions arising from your assessment that supports your decision.

Equality & Diversity and access to services underpins the standards of the HOS-AR Service as per Trust policy and BTS guidelines

EIA Reviewer: E Hudson

Date completed: 24/01/24

Signature: E Hudson