Paediatric Pan London Oxygen Group (PPLOG)

Discharge Bundle

Version 1.2

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Reviewed by: December 2020 at the latest

This document has been endorsed by:

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Paediatric Pan London Oxygen Group (PPLOG)

Background

Current practices of caring for children with oxygen therapy within the tertiary and community settings have been identified by a group of Children's Nurses as not evidence based. In 2016, a Respiratory Nurse with a link to all of the Children's Services in London (Caroline Lock, Clinical Nurse Advisor at Air Liquide) encouraged as many Children's Nurses including Community Neonatal Nurses to share their concerns and find solutions to make the transition from hospital to home of every child on oxygen therapy seamless. The aim of the Paediatric Pan London Oxygen Group (PPLOG) is to bring the knowledge and experience of Respiratory Nurses, Community Children's Nurses and Community Neonatal Nurses together, and set standard guidelines that will ensure the management of children on oxygen therapy is safe and uniform within the London region. Moss and Bond (2002) cited by Nzirawa et al. (2017) states that having a child on home oxygen therapy could be a complicated process that requires planning and precise communication. Hence, the role of the health professional would be to support and give information to the families when needed (Nzirawa et al., 2017). According to the National Institute for Health and Care Excellence (NICE) (2010), neonatal units must show evidence of having trained and competent multidisciplinary teams who can deliver care in neonatal settings (Nzirawa, 2015 pg 35). Bliss (2012) states that decisions made in a child's best interest are based on evidence-based practices, and are informed by parents who are encouraged and supported in the decision-making process.

Objectives

1. To set standard guidelines for oxygen within children services
2. To establish standard guidelines for oxygen weaning within tertiary and community settings
3. To streamline the discharge process for children on home oxygen therapy
4. To facilitate educational programmes for hospital staff preparing to discharge a child on home oxygen therapy
5. To support the families with evidence-based information on how to care for their child on home oxygen therapy
6. To set a platform and create a Pan London Oxygen protocol for education and management of all children on oxygen therapy within tertiary and community settings
7. The PPLOG to audit every setting using the set guidelines/pathways annually through staff, parents and children satisfaction feedback.
8. Guidelines and pathways to be reviewed every three years or earlier if advised of new evidence-based practices.

Paediatric Pan London Oxygen Group

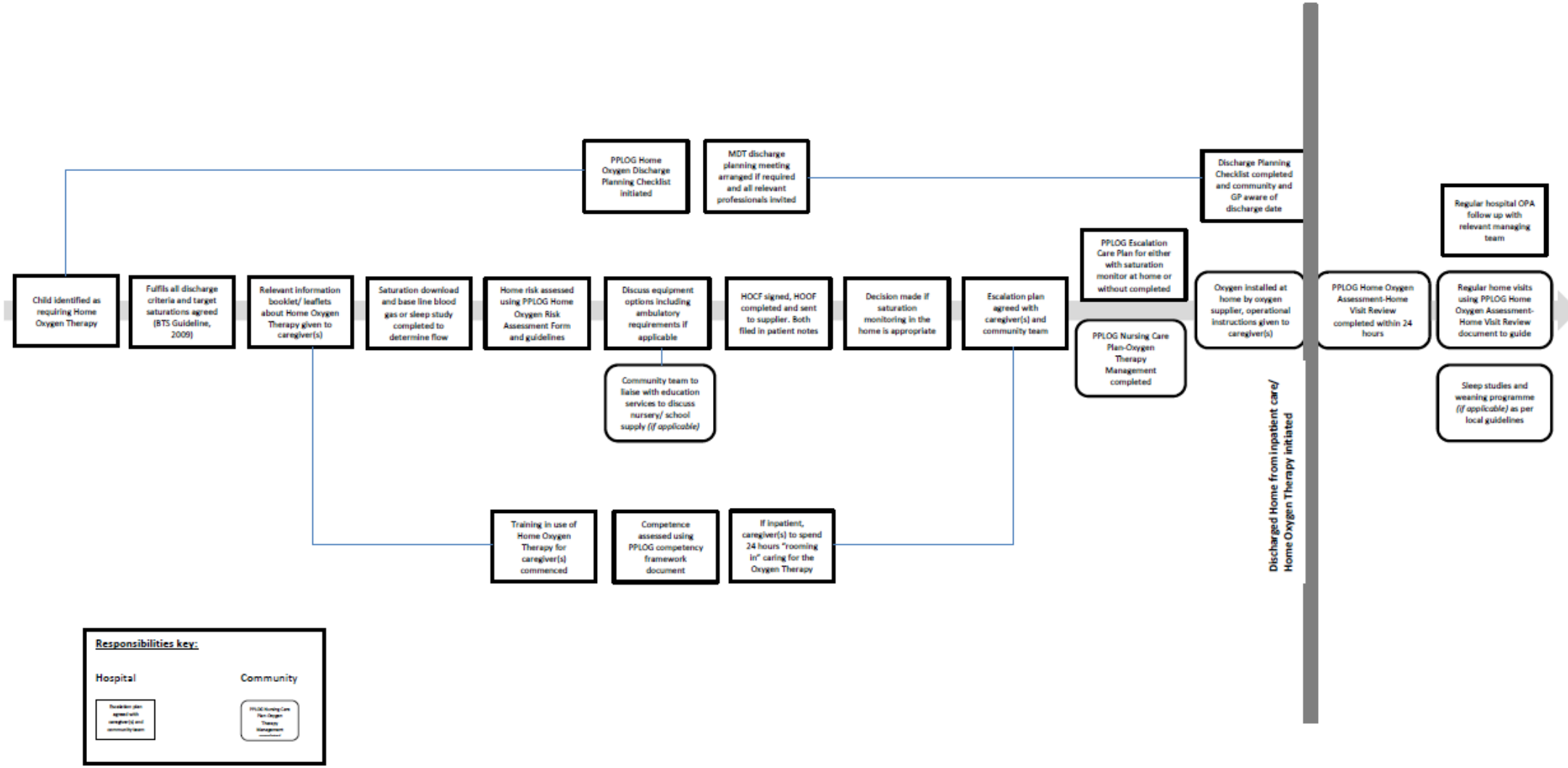
PPLOG Discharge Bundle Documents Contents:

This Paediatric Pan London Oxygen Group document contains the following 7 separate documents to aid the safe and timely discharge of a child requiring home oxygen across Greater London. The Paediatric Pan London Oxygen Group is made up of allied Health Professionals involved in the discharge process of children requiring home oxygen daily and includes medical, nursing and educational representation from community, tertiary hospital, Neonatal Intensive Care and commissioned Oxygen Provider settings. These professionals are committed to streamlining the discharge process of children requiring home oxygen across London. This PPLOG discharge bundle is available for use by clinical teams. The bundle elements should not be changed but the format and presentation of the documents can be amended for local use. Please acknowledge PPLOG as the source.

1. Home Oxygen Discharge Pathway using PPLOG Discharge Bundle
2. Home Oxygen Discharge Planning Checklist *(for completion by discharging centre, filed in notes and copy to CCNT)*
3. Parent/ Carer/ Staff competencies *(for completion by discharging centre, filed in patient notes and copy to the individual and the relevant CCNT)*
4. Home Oxygen Risk Assessment Form Prior to Discharge, including Guidelines for completing the Home Oxygen Assessment *(for completion by CCN, filed in CCN notes and copy to discharging centre and caregiver- including a copy to caregiver of the Guidelines used to complete the assessment)*
5. Home Oxygen Home Visit Review Document *(for completion at first home visit by CCN and at least annually thereafter)*
6. Example Escalation Care Plan with or without Saturation Monitoring *(either one for completion by discharging centre, filed in notes and copy to caregiver and CCNT)*
7. Example Community Nursing Team Care Plan-Oxygen Therapy Management *(for completion by CCN for filing in CCNT notes)*

Home Oxygen Discharge Pathway using PPLOG Discharge Bundle

Adapted using BTS guidelines for home oxygen in children (2009) and NHS Primary Care Commissioning (2011) Home Oxygen Service – Assessment and Review: Good practice guide



Paediatric Pan London Oxygen Group

HOME OXYGEN DISCHARGE PLANNING CHECKLIST

NAME: **ADDRESS:**
DOB:
NHS Number:
CONSULTANT:

CRITERIA	Sign & Date completed	COMMENTS
1. Oxygen Family know why the child is going home on oxygen		
Saturation download and base line blood gas or pulse oximetry/ sleep study done to determine flow of oxygen required for home		
PPLOG Home Oxygen Risk Assessment form completed and copy filed in patient notes		
Home Oxygen Consent Form (HOCF) completed, signed and filed in notes ***(Appendix 3)***		
Home Oxygen Order Form (HOOF) completed (min 48hrs pre discharge) including portable cylinders if requiring continuous oxygen (NHS Primary Care Commissioning, 2011) and faxed/ emailed to (or completed on the Oxygen Portal): 1. oxygen company (Air Liquide/ Dolby Vivisol/ BOC) ☐ 2. GP ☐ 3. CCNT/ Clinical lead (CNS) ☐ 4. Filed in notes ☐		
Home Oxygen Therapy annual review letter ***(Appendix 4)*** given to parents		
Oxygen has been installed **Date:…….**		
Portable cylinder brought in from home is on the ward*(to travel home on)*		
Car Seat/ seated trial completed if applicable *(30 minutes, saturating >92%)*		
Immunisations up to date? **Yes / No** *Advise flu vaccine at the start of winter*		
Eligible for RSV Vaccine (Palivizumab)? **Yes / No** *[Refer to NHS England Commissioning document for this year for eligibility]*		
Oxygen Competency document completed for main parent(s)/ carer(s) **Date:……**		
Oxygen competencies faxed to CCNT for reassessment at home		
Parent/ carer has "roomed in" and is able to provide 24hrs of continuous care **Date:……..**		
Explained to parents that oxygen is a drug and as with medication, it must be prescribed. Too much or too little can be dangerous. **Unless advised to do so, do not change the flow of oxygen.**		
2. Discharge planning meeting required *(if patient has complex needs or safeguarding concerns)* **Yes / No** **Date:……..**		
3. Emergency- check family: Had Basic Life Support (BLS) training **Date:……..**		
Know who to contact when unwell and have correct contact details for CCNT, CNS, Ward		
Has hand held summary/ escalation care plan to present to A&E		
4. Home assessment completed on:…….. by:……..(CCNT or CNS)		

Family home safe for home oxygen? **Yes / No- advise changes to be made and reassess** *(Copy of Home Assessment form filed in notes)*		
5. Follow up: Referral to CCNT made		
Initial health professional home visit booked within 24hrs discharge (BTS, 2009)? **Team completing this: …… Date: ……**		
Discharge summary sent to: GP ☐ CCNT ☐ parents ☐		
Hospital OPA follow up booked for 4-6 weeks post discharge (BTS, 2009) **Team:……Date:……..**		
Further sleep studies to be performed by: ☐ CCNT or ☐Hospital **Date:…….**		
6. Target saturation range set: ……..		

Discharged on: …….. **At:** ……..

☐ **Checklist checked and complete**

Discharging clinician: …… **Signature:** ……

HOME OXYGEN COMPETENCY DOCUMENT

COMPETENCIES		Achieved Yes/No	Comments	Review date	Assessor's signature & date	Learner's signature & date
Awareness of why home oxygen is required and understanding of medical condition	• Definition of condition • Rationale for home oxygen • Have read and understood relevant oxygen information booklet					
Awareness of signs of respiratory distress	• Respiratory rate/ normal breathing pattern • Colour • Chest movement • Noises associated with breathing • Head bobbing • Recession • Tracheal tug • Nasal flaring					
Awareness of deterioration and appropriate actions to follow	• Recognises signs of respiratory distress • Aware of care plan and actions- call CCNT or 999 • Aware of appropriate health professionals to contact					

HOME OXYGEN COMPETENCY DOCUMENT

COMPETENCIES		Achieved Yes/No	Comments	Review date	Assessor's signature & date	Learner's signature & date
Awareness of health and safety in the home environment	• Flammable issues at home i.e. appliances, incense, candles/naked flames and creams (oils and petroleum jelly creams) • Dangers of smoking/ electronic cigarettes • Pets e.g. chewing on tubing • Fire brigade notified • Notify your gas/electric *(if applicable)* and home/car insurance					
Can safely use and maintain equipment at home	• Aware that Oxygen is a drug and should not be adjusted unless advised to do so • Aware of the amount of oxygen they are on • Aware how to use an oxygen cylinder • Aware of back up cylinders • Aware of portable cylinders • Aware how to use concentrator *(if applicable)* • Aware how long each cylinder will last • Knowledge of the appropriate use of the concentrator and when to use cylinders • Can explain the difference between the static/standard ambulatory cylinders with the regulatory lightweight cylinders					

HOME OXYGEN COMPETENCY DOCUMENT

COMPETENCIES		Achieved Yes/No	Comments	Review date	Assessor's signature & date	Learner's signature & date
Awareness of equipment necessary to administer oxygen	• Demonstrate how to OPEN and Close the main cylinder valve • Check oxygen cylinder is working • Reduction gauge • Demonstrate how to attach and detach the low flow/micro flow regulator to all types of cylinders installed • Demonstrate how to select the correct flow • Tubing • Delivery mechanism • Humidifier • Cannula/mask - aware to place the tips of the cannula/ tubing into a saucer/ cup of water to ensure water bubbles • Parent aware to wipe cannula dry after tipping into water before placing into the child's nostrils					
Able to give oxygen via nasal prongs/cannula/mask/ ventilator/ tracheostomy	• Able to apply prongs correctly ensuring prongs are round the front *(if applicable)* • Aware of face/nose care • Checks nasal prongs daily • Can secure cannula using tapes and changes weekly-monthly • Recognises when nasal prongs are blocked and aware of troubleshoots • Aware how to apply a face mask and adjust straps- face mask to be changed 6 monthly or when					

HOME OXYGEN COMPETENCY DOCUMENT

	necessary • Aware of how to connect oxygen to ventilator/ tracheostomy *(if applicable)* • Label tubing with date and time • Aware to ensure spare nasal cannula/ tubing and tapes to secure (if applicable) are taken out with the child in case tubing needs replacing					
Aware of BLS	• Can perform BLS					
Aware of the ordering process	• Aware of Oxygen Company contact details • Aware how to order oxygen • Aware if ordering oxygen, a significant amount of time should be allowed					

Following completion of training and supervised practice, I …….. *(Print name)* have undertaken the above skills and assessment. I feel confident to manage and care for *[child's name]*…….'s home oxygen.

Signature: …… **Name:** …… **Relationship to the child/ job title:** ……. **Date:** ……

Assessor's signature: …… **Name:** …… **Date:** …… ***(Assessor must be competent)***

Paediatric Pan London Oxygen Group

HOME OXYGEN RISK ASSESSMENT FORM PRIOR TO DISCHARGE

(See accompanying guidelines for completion)

NAME: **ADDRESS:**
DOB:
NHS Number:

CRITERIA	ASSESSMENT	ACTION
1. **Type of Housing** ☐House ☐Flat…….. Floors…….. Lift **Yes /No** ☐Maisonette…… Floors…….. Lift **Yes/No** ☐Housing Association ☐Council ☐Own Occupier ☐ Privately Rented ☐ Shared Occupancy ☐Attends ……Nursery/School/ **N/A** • Is the house free from obstruction? **Yes/ No** • Is this the only address the child will reside at? **Yes/ No** • How many Bedrooms in the home? • Where will the Child sleep? • How many people occupying house (including visiting relatives)? • Is there a pet in the home? **Yes/ No** • Is there a working smoke detector? **Yes/ No Tested?** • Where will oxygen be stored?	*Higher risk if a flat high up in an apartment block- ensure emergency escape routes discussed* *If property not owned, discuss parent/ carer to inform property owner of the need for oxygen before oxygen can be ordered* *Higher risk if multiple occupancy- ensure emergency escape routes discussed* *Discuss general cleanliness and tidiness- fire risk* *Discuss escape routes* *Alternate address oxygen required at (if applicable):* *Increased risk for broken tubing/ falling cylinders* *Oxygen cylinders in cool dry place out of sunlight. Concentrators in an open space away from open fire/gas fire/radiator and near plug.*	
2. Heating • Is heating adequate and functioning? • What type is it? • Any visible signs or smells of damp?	**Good/ Satisfactory/ Poor** **Electric/ Gas** **Yes/ No**	

CRITERIA	ASSESSMENT	ACTION
3. Telephone • Family has access to telephone for emergency purposes **Yes/No** *Landline or spare fully charged battery for mobile phone is considered essential for emergency calls as mobile may be low battery.*	**Mobile- contract / pay as you go-** *higher risk as may run out of credit* **Number:** **Landline:** **Other contact:**	
4. Electricity • Electric power points for concentrator/ other equipment are located in an appropriate place/ adequate number of electricity points • Is electricity supplied via key meter? ***If family have a concentrator a date for continuous supply must be in place before discharge.***	**Location:** **Number of power points available:** **Yes/ No** *(if concentrator is used, electricity supplier must be notified)*	
5. Health promotion • Do any of the members of the family smoke in the house? ***Higher risk-discuss hazards with smoking.*** • Does anyone use e cigarette? ***Higher risk- Discuss Hazards.*** • Discuss type of oxygen and how this will affect family life and how this impacts their ordering of cylinders. • Discuss using water based creams only on child. • Discuss travelling with equipment using Car/Pushchair/Bus/Train. • Discuss oxygen tubing and hazards with other children/ elderly relatives in house and pets tripping over it. • Remind family they need to bring portable cylinder to the hospital ready for discharge.	**Yes/No**; *Who? Primary carer? Patient?- London Clinical Oxygen Network (LCON) do not advise prescribing oxygen for a patient that smokes due to fire risk* **Yes/No**; Who? ☐ ☐ ☐ ☐ *(Parents to discuss with technician if tubing needs to be secured better to avoid tripping)* ☐	
6. Family Support • Do family have adequate support to care for their child at home • Who will be the main carer? • Do they speak English? **Yes / No** • Is an interpreter required? **Yes / No** • Are they known to social services? **Yes/ No** • Do they have details for DLA/ PIP? *(If applicable)* **Tel 03457123456** • Application for Disability Blue Badge parking within the borough *(if applicable)* • Is a Discharge planning meeting (DPM) arranged? **Yes/ No/ N/A** • Are they known to any other services?	*Who lives at home?* *Who provides support?* *Is support adequate?* *Is there enough room?* *Will they have their own room?* Date of DPM: ……	
7. Relevant People To notify by the family if home Oxygen Used • Home Insurance • Car Insurance • Fire Brigade *(Call local station and ask for duty officer)*	*If there are concerns about the house, the fire brigade should visit to assess prior to oxygen being ordered. Parents can also request a home visit.*	

• Electricity company *(if using concentrator)* • Nursery/ school/ crèche	*These will need separate risk assessment and training*	
8. Naked flames (Advised parents to keep away 3m from naked flames) • Gas Fire/ open fire • Gas Cooker • Candles (including birthday candles) • Incense		
9. Transport • Nearest Underground/ Overground / train station • Nearest bus stop • Parking available		

IS HOME SUITABLE FOR OXYGEN?

☐ **YES: Low risk. No alterations required all identified risks discussed with parent/ carer**

☐ **YES: Some increased risk. All identified risks discussed with parent/ carer and advised steps to reduce risks (see above actions)**

☐ **NO: Very high risk. Home unsuitable for oxygen due to …….**

Home assessment completed by:

Name: ……..…… Signature: …… …… Job Designation: …… Date…….

Parent/ carer present at home assessment:

Name: …….. Signature: …….. Date: ……

PLEASE SEND A COPY OF THIS FORM TO THE CLINICIAN REQUESTING/ ORDERING HOME OXYGEN

GUIDELINES FOR COMPLETING HOME OXYGEN RISK ASSESSMENT FORM

These guidelines have been written based on the information provided by the current commissioned Home Oxygen Provider for London and using the safety guidelines stated in the BTS (2009).They can be used to guide your home oxygen risk assessment in place of other adult focussed risk assessment forms required before home oxygen can be ordered and can be given to the family so that they are aware of your assessment criteria and the risks associated with home oxygen.

1. Housing:

What type of housing the family are residing in will determine who they need to inform about using oxygen. If the property is rented they will need to inform their landlord and if they are in a council property the council in which they reside will need to be alerted to oxygen being placed in the property.

Home conditions must be satisfactory before oxygen can be placed in a home. BTS guidelines (2009) state there should be;

- Enough space for oxygen equipment
- Conditions of hygiene/cleanliness
- Clear atmosphere (i.e. not smoky)
- Landline telephone installed (see 3 for further details)
- No anticipated problems with electricity supply i.e. not on a Prepay electricity meter (if a concentrator is required)
- Easy access to take infant out in buggy with oxygen cylinder (e.g. a lift in a block of flats)

Whether the child is discharged on an oxygen concentrator or on cylinders depends on the amount of flow prescribed and the predicted duration they will remain on oxygen. Oxygen cylinders may be more appropriate if the initial flow rate is lower than 0.3litres/min and the anticipated duration of oxygen therapy is less than 3 months (BTS, 2009).

If the child requires continuous Oxygen Therapy, 2 oxygen concentrators may be required, one in the child's bedroom and one in the main living room area. They are plugged into the mains and work by filtering the room air and removing the nitrogen to increase the oxygen concentration so that purified oxygen with a concentration of 95% can be delivered to the patient (BTS, 2009).

It is important that the house is free from obstruction both inside and outside. Obstruction, e.g. rubbish/building materials, may be a safety risk for those delivering oxygen, professionals visiting and parents coming in and out whilst traveling with equipment. It is also a fire risk (see 5).

Storing the equipment:

- Oxygen equipment needs to be kept in a well ventilated area. It should never be stored in the same environment as flammable liquids (e.g. petrol, paint, oil, grease or aerosols) or combustible materials (such as paper, card, clothing, toys and any other items that may burn easily)
- Cylinders need to be kept clean and dry and protected from extremes of heat and cold. Also away from any sources of heat including direct sunlight and radiators
- If there are any concerns regarding the leakage of gas, the supplier should be contacted as soon as possible
- Cylinders must be stored either laid down flat or secured upright to prevent them from falling over, especially if there are young children in the house

2. Heating:

See storing equipment in 1.

3. Telephone:

Landline is considered essential (BTS guidelines, 2009) or provision should be made for a spare, fully charged battery to be available for a mobile phone in an emergency. Parents/ carers may need to make emergency calls and mobile may be low in battery charge or reception poor. Calling healthcare professionals can also be more costly on a mobile. Consider a landline for incoming and emergency calls only.

4. Electricity:

See 1 for storage of concentrator and electricity points needed.

If using an oxygen concentrator, the Electricity Company should be informed (see 7) so that if there is a power cut in the area they would be priority for turning back on. If the Electricity was going to be off for some time, the company would need to provide house with a temporary generator.

5. Health promotion:

Before prescribing oxygen it is important that you carry out a risk assessment to ensure that the patient and, or carer, understands the safety advice around the use of home oxygen, this includes the dangers of smoking cigarettes and e-cigarettes near to their oxygen equipment.

Fire Risk:

Materials burn much faster in oxygen than in air alone, it is therefore important that parents know the risks.

- NEVER smoke or let anyone else smoke near your child when they are using their oxygen equipment, this includes E-Cigarettes
- NEVER charge an E-Cigarette or similar device close to their child on oxygen or near the equipment itself. Whilst the effects of inhaling an E-Cigarette vapour may be different, they are still a potential ignition source and, in the context of oxygen rich environment, have the same fire risk as traditional cigarettes (British Compressed Gases Association, 2014)
- NEVER use oxygen equipment near an open fire or naked flames, such as matches, lighters, gas cookers or candles (within 3 metres). Remember that birthday candles are also a naked flame
- NEVER use their oxygen near other heat sources such as electric or gas heaters or boilers (within 1.5 metres)

Environment:

When oxygen equipment is turned on, oxygen can build up unnoticed on materials such as clothing, hair, fabrics, wood and paper. This can cause them to burn more easily if they catch fire. Because of this, patients should:

- ALWAYS turn off their oxygen equipment when they are not using it
- ALWAYS use or store their oxygen equipment in a well ventilated area
- NEVER place their oxygen equipment near curtains or cover it with coats, blankets or other materials that may restrict the air circulation around it
- Aerosol cylinders (e.g. furniture polish) should not be discharged near oxygen source
- NEVER leave their cannula or mask on the bed or chair when oxygen equipment is switched on

Handling the equipment:

- Oxygen concentrators must be placed with room around to get to the child should any problems occur
- Always make sure hands are always clean and only use water based soluble creams or products similar to K-Y jelly when using oxygen equipment
- Never use oils or grease with oxygen equipment
- Never use Vaseline or other oil based creams to soothe a sore area around the child's nose or mouth
- If using sun cream ensure it is not oil or petroleum based

Many commonly used products such as Vaseline or E45 contain a high percentage of petroleum or other oils, which, when mixed with a high concentration of oxygen can lead to an increased risk of fire and burns to the skin. If you have to use oil based nappy cream, ensure you stay away from the oxygen and thoroughly wash hands before and after use. For cradle cap avoid using baby oil and instead wash scalp with a gentle baby shampoo and use a soft brush to help remove flaky skin.

Trip Hazards:

The Oxygen technician will provide them with a safe amount of tubing to meet their needs around the home up to a maximum distance of 15 metres. (Over 15 meters will reduce flow).

Parents/ carers need to be aware that any oxygen tubing is a potential trip hazard for them and others.

They should:

- ALWAYS take care to ensure their tubing does not get kinked, damaged, trapped in doors or crushed under equipment and furniture like cots and high chairs, as this could affect the flow of their oxygen
- ALWAYS ensure their tubing does not pass close to naked flames including gas fires, gas cookers and candles, or hot items such as, electric cookers and electric heaters. These could damage or melt the tubing and cut off the oxygen supply or even cause a fire
- ALWAYS be aware of children and pets that may trip on tubing, chew tubing or knock over oxygen cylinders
- NEVER modify or tamper with their own oxygen tubing by adding to it, or changing components
- NEVER remove or tamper with the firebreaks in the tubing

Travelling with equipment:

By car/taxi

- A no smoking rule must be observed in any vehicle carrying oxygen
- Must keep vehicle well ventilated when travelling with oxygen
- Cylinders should be inspected prior to journey for any signs of problems
- Cylinders need to be kept out of direct sunlight and heat
- Secure cylinders appropriately prior to journey so that they cannot move about freely as this could lead to cylinder damage, or potentially cause harm to people in the vehicle.
- Oxygen cylinders should not be carried in front passenger seat
- Car insurance company must be aware of need to carry oxygen

Pushchairs/Buggies

- Be aware of oxygen cylinder changing the centre of gravity.
- Ensure cylinder is located as low as possible so it is less likely to fall.
- Take note of weight restrictions on buggies.

Bus/train

- Cylinders can be taken on public transport as long as they are in good condition and safety measures are undertaken.
- Local arrangements vary with companies so it is advisable that parents/carers are to contact individual companies for advice regarding transport with oxygen equipment.

Holiday

- Not impossible but often has to be funded privately by the family if wanting to travel abroad.
- The oxygen provider requires a minimum of 3 working days' notice but if possible planning at least 6-8 weeks in advance is preferable.
- The oxygen provider can arrange for oxygen delivery within the UK but not abroad. Your cylinders from your usual order cannot be taken abroad.
- Before contacting your oxygen provider, contact your planned accommodation destination within the UK to gain permission for the oxygen equipment to be delivered and stored in the accommodation.
- Some centres may want your child to have a fitness to fly test before flying on an aeroplane or the flow of oxygen may need to be increased while in the air- please contact your managing centre and inform them of intention to travel ASAP if they plan to travel abroad regardless of if you plan to travel by aeroplane or not.
- Consider using a checklist, such as the British Lung Foundation Holiday Checklist (https://www.blf.org.uk/sites/default/files/Going_on_holiday_checklist_June_2015.pdf) to help make sure that you are prepared for the holiday.
- If travelling within Europe apply for the European Health Insurance Card (EHIC) for your child and check on the website if eligible for cover within Europe: https://www.nhs.uk/NHSEngland/Healthcareabroad/countryguide/Pages/EEAcountries.aspx

6. Family Support:

When parents are completing the disability living allowance form, the CCNT will only be able to write the supporting statement. The rest of the form is completed by the family.

7. Notifying relevant companies

- Home insurer needs to be informed. It should not affect premiums but it means you are covered if you needed to make a claim. The oxygen equipment is covered by the oxygen provider so you do not need to insure them.
- Car insurer needs informing, but no warning stickers or medical cards are to be displayed as this can mislead the emergency services if oxygen isn't always on board.
- Electricity Company so that priority can be ensured in a power cut (if a concentrator is in use).

The patient's details will be shared with the local Fire and Rescue Service so that in the event of a fire, the Fire and Rescue Services know that there is home oxygen equipment at the address.

The patient may receive a home safety visit from their local Fire and Rescue Service to help manage any risks and plan how to evacuate the building in the event of a fire. It is important that they allow this to take place.

8. Naked flames:

See 5, under fire risk.

Parents/ carers should be aware that oxygen provision is continuously assessed and equipment may be increased or decreased as required and will be removed when appropriate.

Paediatric Pan London Oxygen Group

HOME OXYGEN HOME VISIT REVIEW DOCUMENT

NAME: **ADDRESS:**
DOB:
NHS Number

All points to be discussed/ fully completed at the first visit post discharge and at least once annually. This document can be used to guide subsequent visits.

CRITERIA	ASSESSMENT	ACTION
1. Oxygen ☐ Installed correctly with correct flow dial ☐ Information booklet given ☐ Family knows why their child requires oxygen ☐ Family knows how much oxygen the child should be on and how to adjust it according to their escalation plan *(if applicable)* ☐ Family know how to care for and fit/ secure nasal prongs/ mask *(if applicable)* ☐ Family knows how to connect interface (nasal prongs/ face mask/ ventilator/ tracheostomy mask/ Swedish nose) to oxygen ☐ Family knows where to obtain new oxygen tubing/ interface from and how often to change these ☐ Correct size Nasal Prongs/ face mask *(if applicable)* ☐ Family know what to do if the concentrator breaks down *(if applicable)* ☐ Family Know how to reorder cylinders ☐ Has contact details of oxygen company ☐ Know how to check oxygen cylinder is working and how much there is in cylinder. Always check cylinder is on after a new delivery Oxygen supply ordered meets the child and family's needs? Yes / No If "No": ☐ Not enough ☐ Too much	*Observe carer transferring child from portable cylinder to static cylinder or concentrator. This may include using an oxygen low flow regulator.* *If using static cylinders, advise parents to always use these when at home. Keeping child on portable cylinder whilst at home will increase number of portable required.* *Discussion with family around the continuous assessment of the need for oxygen including the amount of cylinders and the possible removal in the future if appropriate.*	
2. Emergency ☐ Have hand held summary/ escalation plan to present to A&E ☐ Know what to do in emergency ☐ Understand signs of respiratory distress ☐ Know only to increase oxygen in an emergency and in line with care plan (if applicable)	*Oxygen is prescribed and doses should only be changed by healthcare professionals.*	

CRITERIA	ASSESSMENT	ACTION
3. Social support • Do the family have enough support • Do they have DLA/ PIP *(If applicable)* • Is the child school/ nursery age- consider SEN referral for EHCP		
4. CCNT Support Do family have correct contact details for CCNT,CNS, Ward? • How much support does family want from CCNT/CNS • Explain what supplies will be provided by the CCNT • Has a prescription been requested from GP for tapes to secure nasal prongs? Oxygen provider will provide nasal prongs • Care plan completed? • Frequency of visits explained. This is dependent on capacity but the recommended regime is: 1st week CCNT will visit up to 5 times. 2nd and 3rd week CCNT will visit twice a week 4th week onwards CCNT will visit once a week CCNT should visit within 24hrs of discharge (BTS 2009)	Yes ☐ Yes ☐ Yes ☐	
5. Follow up ☐ SpO_2 monitoring at least 4 weekly (BTS 2009) ☐ Hospital OPA in 4- 6 weeks with managing team (BTS, 2009) ☐ Developmental team: physiotherapy, hearing, eyes (if required) ☐ Dietician ☐ Other appointments:		
6. Safety • Oxygen stored safely ☐ • Reinforce no smoking/ open flames ☐ • Check smoke alarm installed and working ☐		
7. Discussed what saturations should be *(if applicable)*	Baseline observations: SpO_2…….. HR……. RR……	
8. Plans for saturation monitoring and sleep studies 1st sleep study/ SpO_2 download to be completed prior to hospital OPA		

Name: _____ **Signature:** _____ **Job Designation:** _____ **Date:** _____

Escalation Care Plan: Saturation monitor at home

Date:

Patient Details:

Name of child: Date of Birth:

Address: Hospital Number:

Landline/ Mobile phone number:

Clinical Team Details:

Managing Team Consultant in charge of case:

Main site of care:

Local Consultant Paediatrician:

Local hospital:

Community Nurse Team:

Phone no:

Email:

Diagnosis:

1.

2.

3.

Oxygen Ordered: _____L/min continuous/ at night only *(delete as appropriate)*

Variable flow rate: Min _____ L/min to Max _____L/min / No variable flow rate set *(circle/ delete as appropriate)*

Home Oxygen Supplier:

Home Plan:

- Saturations should be ____% in ____L/min Oxygen.
- When well does not require regular monitoring of oxygen saturations during the day
- Continuous oxygen saturation monitoring at night
- Check saturations more frequently if concerned or unwell e.g. when increased secretions (has a cold), coughing, or increased work of breathing compared to usual or lethargic (quieter/ more sleepy than usual)

Emergency Plan at home:

- Ensure good trace on saturation monitor
- If **saturations <92%:** increase oxygen to_____ L/min and continuously monitor oxygen saturations
- **If oxygen increased**: continuously monitor oxygen saturations, try interventions such as suction (if available), removing causes of distress such as pain or wet nappy and slowly try to wean back to usual amount of oxygen over 15- 30 minutes.
- If able to get back to usual amount of oxygen with oxygen saturations maintaining within the normal rage continue to check saturations more frequently e.g. every hour until unconcerned.
- **If concerned or unwell:**
    - increased secretions (has a cold)
    - coughing

- increased work of breathing/ faster breathing compared to usual
- lethargic (quieter/ more sleepy than usual)

❖ **Contact Community Nursing Team for advice/ review even if saturations are within normal range**

❖ **If saturations 89%, blue/ grey colour, particularly at the lips or unable to wean oxygen back to usual amount after 30 minutes call 999 and increase oxygen to _____L/min while waiting for ambulance**

❖ **Take this care plan with you to hospital**

Hospital Emergency Plan:

1. Follow local escalation policy
2. Consider checking capillary blood gas
3. Consider chest x-ray
4. If Oxygen requirement > 40%, raised CO_2 on blood gas or child appears tired consider commencing High Flow Nasal Cannula Oxygen (if available)
5. Perform Bacterial cough swab and viral screen
6. Check previous microbiology and consider commencing _____ as first line antibiotic unless previous microbiology indicates otherwise
7. Consider contacting Managing Team for advice

Parents Signature:

Parents Name: **Date:**

Managing Team Consultants Signature:

Consultant's Name: **Date:**

Escalation Care Plan: Without saturation monitor at home

Date:

Patient Details:

Name of child: Date of Birth:

Address: Hospital Number:

Landline/ Mobile phone number:

Clinical Team Details:

Managing Team Consultant in charge of case:

Main site of care:

Local Consultant Paediatrician:

Local hospital:

Community Nurse Team:

Phone no:

Email:

Diagnosis:

1.
2.
3.

Oxygen Ordered: _____L/min continuous/ at night only *(delete as appropriate)*

Variable flow rate: Min _____ L/min to Max _____L/min / No variable flow rate set *(circle/ delete as appropriate)*

Home Oxygen Supplier:

Home Plan:

- Should be pink and well perfused (good colour) in ___L/min Oxygen.
- Community nursing team can be contacted to check oxygen saturations if required when unwell.

Emergency Plan at home:

- If concerned or unwell:
  - increased secretions (has a cold)
  - coughing
  - increased work of breathing/ faster breathing compared to usual
  - lethargic (quieter/ more sleepy than usual)

❖ **contact Community Nursing Team for advice/ review**

❖ **If pale or blue/ grey colour, particularly at the lips, call 999 and increase oxygen to _____L/min while waiting for ambulance.**

❖ **If few, gasping breaths/ no breaths at all, start Basic Life Support**

❖ **Take this care plan with you to hospital**

Hospital Emergency Plan:

1. Follow local escalation policy
2. Consider checking capillary blood gas
3. Consider chest x-ray

4. If Oxygen requirement > 40%, raised CO_2 on blood gas or child appears tired consider commencing High Flow Nasal Cannula Oxygen (if available)
5. Perform Bacterial cough swab and viral screen
6. Check previous microbiology and consider commencing _____ as first line antibiotic unless previous microbiology indicates otherwise
7. Consider contacting Managing Team for advice

Parents Signature:

Parents Name: **Date:**

Managing Team Consultants Signature:

Consultant's Name: **Date:**

Nursing Care Plan-Oxygen Therapy Management

The following care plan must be discussed and agreed with the parent/career. It can be amended according to the needs of the patient. If there are any changes required after the completion of the care plan the current plan must be reviewed and signed again with agreement of the parent/career. To be kept in the patient file by the Community Nursing Team.

Name	NHS number	Date of birth	Hospital and Hospital number

Issues Identified: Oxygen dependent Child
Goal/Aim: Oxygen therapy is used to decrease work of breathing by increasing alveolar oxygen tension • For the oxygen therapy to benefit the child's clinical status and improve health • For the child to be able to receive oxygen therapy in their home safely and for parents to be aware of the risks and adhere to appropriate measures to optimise safety • For the child to be successfully be weaned off oxygen as tolerated/ if appropriate
Action/Intervention:

Checklist	Date	Signed by nurse
Assessment post discharge completed		
Documents/information leaflets given to parents		
Competency completed		
All supplies in place		
Contact numbers provided		

<table>
<tr><td>Medical history</td><td></td></tr>
<tr><td>Oxygen requirement currently</td><td>Oxygen Provider:_____

Amount of oxygen: _____Litres

<u>Method of administration</u>:
(Please circle) e.g: Mask/ Cannula (Type- please give details)

Other:_____

<u>Device: (Please circle)</u>
Cylinder: Compressed gas/ Liquid (Please circle)
Concentrator</td></tr>
<tr><td>Baseline observation</td><td>Heart Rate:
Effort in breathing:
Saturation:
Respiratory rate:</td></tr>
<tr><td>If child's observations are within these parameters they must go hospital to be reviewed</td><td>Heart Rate below:
Heart Rate above:

Saturations below:

Respiratory Rate above:
Respiratory Rate below:</td></tr>
<tr><td>Parents understand signs of symptoms of an emergency and what actions to take</td><td>Yes/ No:

No? -Action plan:

Details/Notes:

<table><tr><td>Oxygen Increase Amount</td><td>_____Litres</td></tr><tr><td>Contacts in emergency</td><td>Name:_____
Position:_____
Number: _____</td></tr></table></td></tr>
<tr><td>Agreed frequency of visits</td><td>Preferred days and time (According to local guidelines):</td></tr>
</table>

What would you expect from your visit?	
What would you like your nurse to do for your child? (Parent's perspective)	
First visit conducted	Date: Notes:
Plan for oxygen weaning:	According to local policy but usually oxygen weaning will take place after a successful sleep study/ room air challenge. We will attempt this: _____Months _____Weeks
Signature to confirm agreement with care plan	Parent/career name and signature:_____ Named nurse name and signature:_____ DATE:

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APPENDIX 1

Paediatric Pan London Oxygen Group (PPLOG) Contributors

Name	Organisation
Emilie Maughan (chair)	King's College Hospital NHS Foundation Trust / Royal Brompton and Harefield NHS Foundation Trust
Sarah Allen	Homerton University Hospital NHS Foundation Trust
Abigail Beddow	East London NHS Foundation Trust
Dr Ian Balfour-Lynn	Royal Brompton and Harefield NHS Foundation Trust
Billie Coverly	Great Ormond Street Hospital for Children NHS Foundation Trust
Tamsyn Ginger	Guy's and St Thomas' NHS Foundation Trust
Tori Hadaway	Barts Health NHS Trust
Cat Jones	King's College Hospital NHS Foundation Trust
Caroline Lock	Air Liquide
Wilma Munzara	North East London NHS Foundation Trust
Tendai Nzirawa	Barking, Havering and Redbridge University Hospitals NHS Trust
Carol O'Malley	Bromley Healthcare
Tyree Rawsthorne	Central London Community Healthcare NHS Trust
Rebecca Smith	Barts Health NHS Trust
Nichola Starkowitz	Central London Community Healthcare NHS Trust
Ceara Turner	Bromley Healthcare
Lin Yap	Camden and Islington NHS Foundation Trust

APPENDIX 2

Glossary of Terms and Abbreviations

A&E	Accident and Emergency Department also known as Emergency Department (ED) or Emergency Room (ER)
BLS	Basic Life Support
BTS	British Thoracic Society
CCNT	Children's Community Nursing Team
Child	Throughout this document the term 'child' is used to refer to babies, children and young people
CNS	Clinical Nurse Specialist
DLA	Disability Living Allowance (Under 16 years of age)
DPM	Discharge Planning Meeting
EHC or EHCP	Education Health and Care Plan
EHIC	European Health Insurance Card
GP	General Practitioner/ Family Doctor
HOCF	Home Oxygen Consent Form
HOOF	Home Oxygen Order Form
HR	Heart Rate
Managing team	The team that made the decision that the child requires Home Oxygen Therapy and/ or will be following up the management of the Home Oxygen Therapy
MDT	Multi-Disciplinary Team
OPA	Out-Patient Appointment
PIP	Personal Independence Payment (16 years+)

PPLOG	Paediatric Pan London Oxygen Group
Rooming in	Parent(s)/ Carer(s) stay by the child and care for all of their care needs including any new healthcare needs in order to ensure that they are confident at caring for the child independently. This is usually for a minimum of a 24 hour period so that they are aware of how to care for the child's needs both day and night if applicable
RR	Respiratory Rate
RSV	Respiratory Syncytial Virus (a common virus that causes coughs and colds in winter; the most common cause of bronchiolitis in infants)
SEN	Special Educational Needs
SpO_2	Peripheral capillary oxygen saturation

APPENDIX 3

IHORM IG approved 298

Patient agreement to sharing information

NHS

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

Patient			
Name		Address	
D.O.B.			
NHS number			
Tel/mobile no.		Postcode	
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/distributer where electrical devices have been installed.
6. From time to time, I may be contacted to participate in a patient satisfaction survey/audit. (Should you wish not to participate please tick this box) ☐
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 4

Paediatric Pan London Oxygen Group

Home Oxygen Therapy annual review letter

Date:
NHS no:

Dear Parent/Carer,

RE:

Following updated requirements from Air Liquide Homecare Healthcare Provider, The Paediatric Pan London Oxygen Group (PPLOG) and London Clinical Oxygen Network (LCON), it is mandatory for your child's oxygen requirement and prescription to be reviewed on an annual basis. This may differ if your child is on a weaning regime, in which case this would be a more frequent occurrence.

Please remember that oxygen is a drug and it must be reviewed like all other medication, to ensure your child is receiving the appropriate amount for their medical need and meeting health and safety regulations (NICE guidance, 2017).

Your community nurse, outreach nurse or clinical nurse specialist will also make you aware that the oxygen prescription is being reviewed and if there are any amendments to the equipment that you are using. This includes arrangements for the removal of the oxygen equipment when it is no longer required.

If you have any concerns with the above or your amended prescription please speak to your community nurse, outreach nurse or named clinical nurse specialist.

Yours sincerely,

Supported by the Paediatric Pan London Oxygen Group (PPLOG)