Getting Oxygen Right for Discharge - Adults

Purpose
This guide is to support health care professionals in the ordering of Home Oxygen for patients on hospital discharge.

It is very important that the evaluation of, and communication with, patients is evidence based and standardised to achieve optimal care. Therefore Respiratory Multidisciplinary teams (MDTs) MUST be involved with every patient being considered for discharge on oxygen at the earliest opportunity. It is vital to explain to patients and their families that oxygen on discharge may be temporary and could be removed at the follow-up review, and the reasons for this. Most CCGs across London have a nominated Home Oxygen Service Assessment and Review (HOSAR) team to provide expert local support and follow up after discharge.

Home oxygen equipment is delivered through a supply contract with Air Liquide (Homecare) Ltd (AL) providing patients with a variety of mobile and static devices that deliver oxygen to use at home and outside. Home Oxygen Orders are faxed or emailed to AL, with next day deliveries possible for hospital discharges, or routine deliveries within 3 business days for others. Oxygen ordering needs to be part of proactive discharge planning and urgent orders by hospitals should be exceptional.

Indications for Home Oxygen
Oxygen therapy is a treatment for hypoxaemia, NOT breathlessness, unless accompanied by hypoxaemia. In adults, the vast majority of oxygen is prescribed for chronic hypoxaemia in patients with COPD. Long Term Oxygen Therapy (LTOT = 15 to 24 hours/day) is a treatment that reduces long term cardiovascular mortality. Ambulatory oxygen is only provided if significant desaturation is demonstrated on activity, with measurable benefit in the stable state.

Patient Identification
- Any patient being considered for hospital discharge, regardless of initial diagnosis, who remains hypoxaemic at rest, is still unwell and MUST be assessed by/discussed with the Respiratory MDT. Correct diagnosis and cause of hypoxaemia must be reached and optimally treated before considering discharge. This may result in a decision to continue in-patient treatment until recovery (e.g. pneumonia, PE, heart failure) or a Respiratory MDT led decision to allow discharge, with or without temporary Home Oxygen, until seen in clinic or by HOSAR team.
- Patients being considered for Home Oxygen on discharge must undergo a comprehensive risk assessment as below. Oxygen therapy on discharge should only be prescribed for patients with a satisfactory risk assessment.
- Patients who smoke should not be considered for Home Oxygen Therapy. Hypoxic patients who smoke should be offered clear communication of the reasons oxygen therapy cannot safely be offered to them whilst they smoke. Individualised information about the likely benefits of smoking cessation for them, evidence-based quit smoking treatment and early respiratory/HOSAR follow up.
- Admission Avoidance and Early Supported Discharge teams that take patients referred by the Respiratory MDT home on oxygen, with the aim of providing a longer oxygen weaning time, must ensure that appropriate risk assessment takes place. These patients must be assessed on the oxygen equipment once they have arrived home. It is not appropriate for clinicians to rely on the oxygen company or patient's carers to make this assessment.
- Heart failure/cancer patients who are still hypoxaemic despite being on maximal/optimal treatment should be referred to palliative care prior to discharge and an oxygen plan discussed and agreed with Respiratory MDT. PRN (short burst) oxygen is not indicated for breathlessness without hypoxaemia, and other breathlessness interventions e.g. hand held fans, low dose opiates and positioning are likely to be more effective.
- Any patient who is not hypoxaemic at rest, but desaturates on exercise to < 90%, does not require ambulatory oxygen on discharge routinely. These patients should be discussed with the Respiratory MDT and referred for HOSAR review.

Risks
A comprehensive documented risk assessment, discussed with the Respiratory MDT, is mandatory prior to prescription, to balance the benefits of Home Oxygen with potential dangers. Where the risks outweigh the benefits of the therapy, Home Oxygen should not be supplied.

Smoking: Patients who smoke whilst on oxygen have a significant risk of fire; in London, 1 in 4 house fires involving smokers on oxygen result in death. Thus current smokers being considered for Home Oxygen therapy should have an assessment of their nicotine dependence with carbon monoxide monitoring and be offered evidence-based quit smoking support with pharmacotherapy during their admission and on discharge. These patients need early and ongoing follow up by the Respiratory MDT/HOSAR team on discharge.

Trips/falls: Clinicians must consider issues related to patients’ safe mobility, risk of or history of falls, vision, balance and ability to manage oxygen tubing and bulky oxygen equipment in the home environment before planning Home Oxygen.

Cognition, understanding, behaviour and housing: Clinicians must consider issues related to patients’ cognitive status and ensure that the patient, family and carers understand the rationale for Home Oxygen therapy, how to use Home Oxygen safely and follow up plans. Clinicians must consider safety issues related to general health behaviours eg alcohol use, other drug use and living environment before planning Home Oxygen.

Discharge arrangements
- Patients discharged with Home Oxygen should have this clearly stated on the discharge summary to the GP, as well as the outcome of risk assessment and follow up plans.
- All patients requiring oxygen on discharge must be followed up by the Respiratory MDT /HOSAR team.

What to order – filling in a HOOF (Home Oxygen Order Form)
- The Respiratory MDT should be involved for advice on every prescription
- Patients already on oxygen should continue with their last specialist order; if this is not adequate, the Respiratory MDT should complete a new HOOF B order.

Patients being prescribed Home Oxygen for the first time by a non-specialist should have a non-specialist Home Oxygen Order Form (HOOF A) completed. http://homeoxygen.service.southeastcsu.nhs.uk In most cases this will be a static concentrator supply with a back-up cylinder. For patients with advanced needs, the Respiratory MDT or local HOSAR team should be involved.
Getting Oxygen Right for Discharge: Clinical Decision Tool for non-respiratory clinicians

**Considering discharge with Oxygen?**
(Sats < 92% on Air or Oxygen after 30 mins?)

*Refer / discuss ALL patients with Respiratory MDT*

1. **pO₂ < 7.3kPa?**
   - **Perform ABG / CBG**
   - **How much Oxygen?**
     - Titrate O₂ (0.5 – 4 litres/min) to give sats >88-92%
     - Recheck ABG/CBG after 30 mins
     - Aim for pO₂ > 8kPa and pCO₂ rise < 1kPa with no drop in pH

2. **pO₂ ≥ 7.3kPa?**
   - **With Complications?**
     - pO₂ 7.3 – 8.0 kPa with:
       - Cor Pulmonale or
       - Polycythaemia (PCV>55%) or
       - Pulmonary Hypertension on ECHO

3. **Risk Assessment OK?**
   - (performed and documented)
   - Home Oxygen may not be appropriate if risk too high
   - **Yes**

4. **Oxygen Indicated**
   - **Discuss with Respiratory MDT:**
     - HOOF A required
     - Prescribe O₂ at titrated rate for 15-24 hours/day
     - State Home Oxygen on Discharge Summary to GP
   - **Post Discharge Review:**
     - Resp Clinic / HOSAR - 6 weeks
     - ESD / Admission Avoidance team – compliance and risk assessment at home immediately post D/C
   - **Refer to HOSAR or local Respiratory service**

5. **No**
   - **Oxygen NOT Indicated**
   - **Discuss with Respiratory MDT:**
     - Follow-up plan as borderline patients will require close monitoring

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