GREATER GLASGOW AND CLYDE
GUIDELINE FOR LONG TERM OXYGEN THERAPY (LTOT) PRESCRIBING

Definitions
- LTOT refers to the provision of oxygen to correct the long-term consequences of hypoxia – generally 15 hours or more per day.
- Ambulatory oxygen allows improved mobility or activities of daily living outside the home.

- This guideline does not include the use of oxygen for palliation, where oxygen should be used if patient hypoxic and administration improves this (see GG&C palliative breathlessness guidelines).
- There is no evidence of benefit from oxygen therapy in the absence of hypoxia.
- Do not prescribe oxygen solely for the relief of breathlessness at rest or after exercise (ineffective).
- Short burst oxygen therapy offers no benefit.
- Concentrators are the delivery device of choice if more than two large cylinders are used per week.
- Oxygen therapy (other than for palliation) should only be initiated following review by a respiratory physician.

GPs should refer for consideration of Long Term Oxygen Therapy
- A patient who has severe COPD (FEV1 < 30% of predicted).
- A patient who develops ankle swelling associated with chronic lung disease.

GPs should prescribe large (1360 l) cylinders only
- For those in a palliative care pathway who require oxygen.
- For existing patients
  1) During wait for respiratory assessment.
  2) Post respiratory assessment not requiring oxygen and unwilling to stop using (if 2 or less cylinders per week) – consultant will advise post review.
- During Early Supported Discharge till post-discharge assessment re continuation or stopping.

Out-patient review of need for LTOT will include
- Measurement of arterial gases (O2 only appropriate if PaO2<7.3kPa, or 7.3-8kPa if associated with cor pulmonale, secondary polycythaemia or nocturnal hypoxaemia).
- Recommendation on required oxygen flow rate. In some patients this will require a trial of oxygen therapy to assess effect on CO2 and O2.

SUPPLY following OP review
- Hospital will arrange for a concentrator and back-up cylinder for patient through the central contract.
- GP will be notified of arrangement and of flow prescribed.
- There will be short delay (usually around one week) between OP clinic and delivery of concentrator to patient.
- The hospital will arrange initial review by clinic appointment or home visit. The patient will have a contact number for the local respiratory team.

Ambulatory Oxygen
- Generally intended for those already on LTOT (recommended by a respiratory physician) and who are mobile and leave the house regularly.
- Assessment will be carried out at review OP clinic following initiation of LTOT.
- Some patients who desaturate markedly on exercise may also be referred directly to OP clinic from Pulmonary Rehabilitation team.
- Assessment will include whether correcting desaturation improves physical capacity and so mobility, or allows the same activity with less distress. Otherwise there is no benefit to the patient.
- The hospital will recommend prescription of small volume cylinders for the patient when appropriate. These should be prescribed by GPs in the usual way.

Following Acute Admission
- Previous concentrator oxygen at home.
  Continue as before – hospital will review flow rate if appropriate.
- Previous cylinder oxygen at home.
  - If continuation recommended, and previously using cylinders (>2 per week), the patient will be offered a concentrator.
  - Hospital will arrange for a concentrator and back-up cylinder for patient through the central contract.
  - If no expected benefit from oxygen, this will be discussed with the patient and agreement about continuation or otherwise will be reached.
  - GP will be notified of any changes with the immediate discharge letter.

- No previous oxygen at home.
  - Early supported discharge (ESD) team will arrange short term cylinder supply through the GP if required.
  - Decision about eligibility for LTOT will be made by hospital consultant at next clinic review.
  - If eligible for LTOT, ESD team will arrange for a concentrator and back-up cylinder for patient through the central contract; and cylinder supply through the GP until the concentrator is delivered.
  - If patient does not require LTOT following ESD care, they will be informed, as will the GP at discharge from ESD.

Patients already on Cylinder Oxygen
- If prescription has not been recommended or reviewed by a respiratory physician, please refer to respiratory OP clinic.
- If using more than 2 cylinders per week and oxygen to be continued, a concentrator will be provided.
- If using 2 or less cylinders per week and oxygen to be continued, GP should continue to prescribe cylinders.

March 2009

Printing supported by an unconditional educational grant from the Friends of the Greater Glasgow Chronic Disease Management Programme.
(AstraZeneca UK, Boehringer Ingelheim, Eli Lilly, GlaxoSmithKline, Menck Sharp & Dhahna, Bayer Senior Laboratories)