# COPD clinical management guideline - ADULTS

NHS Islington

- **EXPLAIN, OFFER AND REFER TO PULMONARY REHABILITATION AS APPROPRIATE AND FOR ALL PATIENTS WHO GRADE THEMSELVES MRC≥3**
- **ASSESS PATIENT MOTIVATION, PROVIDE ADVICE, OFFER TREATMENT AND SUPPORT TO STOP SMOKING**
- **Perform Spirometry**
- **Assess for co-existing ischaemic heart disease, heart failure, diabetes and osteoporosis risk and treat as appropriate**
- **Identify and manage anxiety / depression if present**
- **Work with patient to optimise inhaler technique. Check inspiratory flow**
- **Offer Self-management advice and Patient Information Leaflet**
- **Calculate BMI. Offer appropriate diet and exercise advice to all patients. Consider exercise on referral for all patients who grade themselves MRC<3. Consider dietician involvement**
- **Where BMI > 30 and patient has excessive sleepiness consider diagnosis of obstructive sleep apnoea**
- **Offer pneumococcal vaccine and annual Influenza vaccine**

**START at step appropriate to breathlessness. Move to next step only on worsening breathlessness or exacerbations**

ASSESS PATIENT MOTIVATION, PROVIDE ADVICE, OFFER TREATMENT AND SUPPORT TO STOP SMOKING AT ALL STAGES

PLUS AS NEEDED SHORT-ACTING $ß_2$ AGONIST AT ALL STEPS

**Step 1A**

**As required inhaled short acting $ß_2$-agonist**
Salbutamol 100-200micrograms via MDI + spacer **up to QDS OR**
Terbutaline 500micrograms (if inspiratory flow >60L/min) **up to QDS**

**AND/ OR**

**As required inhaled short acting muscarinic antagonist**
Ipratropium bromide 20-40micrograms **up to QDS** via MDI + spacer

**If worsening breathlessness**

**GIVE STOP SMOKING ADVICE**

**Step 1B**

**REGULAR inhaled short acting $ß_2$-agonist**
Salbutamol 200micrograms via MDI + spacer **QDS OR**
Terbutaline 500micrograms (if inspiratory flow >60L/min) **QDS**

**AND**

**REGULAR inhaled short acting muscarinic antagonist**
Ipratropium bromide 40micrograms **QDS** via MDI + spacer

**If worsening breathlessness or exacerbations and $FEV_1$ ≥ 50%**

**GIVE STOP SMOKING ADVICE**

**If worsening breathlessness or exacerbations $FEV_1$ < 50%**

**Step 2**

**OR**

**Long acting muscarinic antagonist (LAMA)** *e.g. Tiotropium Handihaler®* for 4 week trial then review*. **Discontinue SAMA Give LAMA in preference to regular SAMA**

**Long acting $ß_2$-agonist (LABA)** *Formoterol MDI▼ + spacer 12 micrograms BD OR Salmeterol MDI + spacer 50 micrograms BD* for 4 week trial then review*. NB: ensure diagnosis of asthma excluded before prescribing LABA **without** ICS

**Long acting $ß_2$-agonist (LABA) plus Inhaled Corticosteroid (ICS)** (combination inhaler) **OR LABA plus LAMA** if ICS declined or not tolerated. If LAMA prescribed, discontinue SAMA for 4 week trial then review*. NB: ensure diagnosis of asthma excluded before prescribing LABA **without** ICS

**OR**

**Long acting muscarinic antagonist (LAMA)** *e.g. Tiotropium Handihaler®* for 4 week trial then review*. **Discontinue SAMA Give LAMA in preference to regular SAMA**

**If worsening breathlessness or exacerbations**

**GIVE STOP SMOKING ADVICE**

**If worsening breathlessness or exacerbations regardless of FEV1 result**

**Step 3**

**Arrange medical review. Consider contributing factors and differential diagnosis. Offer intensive support to quit smoking and REFERRAL TO PULMONARY REHAB (Referral forms to be faxed to 0844 774 6419) Consider referral to specialist (see below)**

**Long acting $ß_2$-agonist (LABA) plus Inhaled Corticosteroid (ICS)** (combination inhaler) **OR LABA plus LAMA** if ICS declined or not tolerated NB: ensure diagnosis of asthma excluded before prescribing LABA **without** ICS

**If worsening breathlessness or exacerbations**

**Long acting muscarinic antagonist (LAMA) AND Long acting $ß_2$-agonist (LABA) plus Inhaled Corticosteroid (ICS)** (combination inhaler)

**GIVE STOP SMOKING ADVICE**

**If worsening breathlessness or exacerbations**

**Step 4**

**If ICS declined or not tolerated and worsening symptoms**

**Refer for specialist respiratory input (see below)**

***Continue if inhaled therapy being used as recommended AND found helpful by patient. Stop if not being used as recommended or not found helpful. If stopping LAMA, restart SAMA**

**Referral indications to specialist respiratory team include:**

Diagnostic uncertainty
Condition worsens despite optimised treatment
Review for severe COPD
Need for O2 therapy
Nebuliser trial (if not available in primary care)
Disabling breathlessness
One or more hospital admissions and not known to a supporting specialist service
Pulmonary rehabilitation required (if not available in primary care)
Disease onset at <40 years
Generally at risk of hospital admission
Haemoptysis
Ankle oedema
Possible indication for surgery
Advanced directives or palliative care required
Symptoms disproportionate to lung function deficit
Rapidly progressive course of disease (decline in FEV1, worsening breathlessness, decreased exercise tolerance, unintentional weight loss)

▼denotes newly licensed medicines or devices intensively monitored by the MHRA. Report ALL suspected adverse reactions via Yellow Card Scheme LABA = Long-acting $ß_2$ agonist, LAMA= Long-acting muscarinic antagonist, ICS=Inhaled Corticosteroid Use spacer device with MDI. Further copies of this guideline available from NHS I Medicines Management Team ☎020 75271197/1163

*For full prescribing information please refer to current BNF / manufacturers information - SPC*

**Reference:** www.nice.org.uk. NICE Clinical Guideline 101 June 2010

Updated by NHS Camden & NHS Islington Joint Respiratory Subgroup 01/2011 Review date 01/2014

# Diagnosing COPD

**Think of diagnosis of COPD for patients who are:**

- over 35
- cigarette OR cannabis smokers or ex-smokers (>10 pack years)
- have any of these symptoms:
  - exertional breathlessness
  - chronic cough
  - regular sputum production
  - frequent winter 'bronchitis'
  - wheeze
- and have no clinical features of asthma (see table below)

Exclude other potential diagnoses

- **Physical examination** (possible cardiac causes, TB, obstructive sleep apnoea, localised wheeze – ? lung cancer)
- **Chest X-Ray (**TB/ lung cancer)
- **Serial peak flow diary** (20% or more variation suggests asthma (see below)
- **Bloods** i.e. FBC,ESR,TFT (i.e. anaemia, polycythaemia, Hypothyroidism, TB)

**Consider bronchiectasis if large amounts of sputum daily or frequent infections. Refer to local bronchiestasis treatment guidelines**

**Perform spirometry post bronchodilator (see below):**
Airflow obstruction is defined as:

- $FEV_1/FVC$ <0.7 and $FEV_1$ <80% predicted **OR**
- $FEV_1/FVC$ <0.7 and $FEV_1$ ≥80% predicted and symptoms present

**Perform oximetry** if $FEV_1$ <50% predicted or ankle oedema

**Diagnose asthma when:**
- serial peak flow measurements show ≥20% diurnal or day-to-day variability or
- spirometry returns back to normal after steroid trial or bronchodilator
- there is a >400ml response to bronchodilators (see below) or
- there is a >400ml response to a steroid trial (see below)

READ CODE as ASTHMA H33

**Diagnose COPD when:**
- serial peak flow measurements show no significant diurnal or day-to-day variability and
- there is a <400ml response to bronchodilators (see below) or
- there is a <400ml response to a steroid trial (see below)

READ CODE as COPD H3

**Diagnose asthma and COPD when:**
Patient responds to bronchodilator/steroid reversibility trial (see parallel boxes) but evidence of obstruction remains on spirometry.

READ CODE as ASTHMA H33 **AND** COPD H3 and treat as asthma and COPD

**Consider an alternative diagnosis in:**
- older people without typical symptoms of COPD where the $FEV_1/FVC$ ratio is <0.7
- younger people with symptoms of COPD where the $FEV_1/FVC$ ratio is ≥ 0.7

**Symptomatic patients under age 35:**
COPD rare – Measure alpha-1-anti-trypsin in younger people with COPD and ask about cannabis smoking

**Determine disease severity** (see table below)

**Start appropriate treatment** (see flowchart overleaf)

**Reassess diagnosis** in view of response to treatment

## Reversibility testing is used to exclude asthma, not diagnose COPD

### Bronchodilator reversibility

Spirometry should be measured before and after an adequate dose of inhaled bronchodilator.
Ideally use nebulised bronchodilator 2.5 – 5 milligrams salbutamol. Alternatively, use inhaled bronchodilator (using high doses via a spacer) 4 puffs x 100 micrograms salbutamol. Measure lung function 15 minutes after $\beta_2$-agonist.

### Steroid trial to exclude asthma

Spirometry should be measured before and immediately after an adequate dose of steroid.
Use 30 milligrams oral prednisolone (non-EC tablets) daily for 2 weeks.

### Spirometry

Spirometry is a near patient test and therefore should be performed in the community. Support is available from the PCT Primary Care Respiratory Nurse Specialists regarding spirometry services, provision and training.
(**Respiratory nurses**: NHS Islington Provider Services Tel: **020 7527 1715**)

### Pulse oximetry

Essential to assess hypoxia acutely and to assess need for referral for Long Term $O_2$ therapy ($SaO_2$ < 92% on air) when stable.
During acute exacerbations, aim for saturation of 88-92% pending arterial blood gases or range documented on Patient Specific Protocol (PSP) or oxygen alert card

**Clinical features differentiating COPD and asthma**
*(NB Some patients may have features of both asthma and COPD)*

| | COPD | Asthma |
|---|---|---|
| Smoker or ex-smoker | Nearly all | Possibly |
| Symptoms under age 35 | Rare | Common |
| Chronic productive cough | Common | Uncommon |
| Breathlessness | Persistent and progressive | Variable |
| Night-time waking with breathlessness and/or wheeze | Uncommon | Common |
| Significant diurnal or day-to-day variability of symptoms | Uncommon | Common |

**Reference:** www.nice.org.uk NICE Clinical Guideline 101 June 2010

**Ensure severity of diagnosis is adequately explained to patients**

**Gradation of severity of airflow obstruction**

| Post-bronchodilator $FEV_1/FVC$ | FEV1 % predicted | Post-bronchodilator |
|---|---|---|
| <0.7 | ≥ 80% | Stage 1 – Mild* |
| <0.7 | 50-79% | Stage 2 - Moderate |
| <0.7 | 30-49% | Stage 3 - Severe |
| <0.7 | < 30% | Stage 4 – Very Severe** |

*Symptoms should be present to diagnose COPD in people with mild airflow obstruction
**Or $FEV_1$ <50% with respiratory failure

Updated by NHS Camden & NHS Islington Joint Respiratory Subgroup 01/2011 Review date 01/2014

# COPD Additional Prescribing and Disease Management Information

## INHALER PREFERRED PRESCRIBING CHOICES

**Short acting ß$_2$-agonist (SABA)** – salbutamol via MDI device and spacer
**Short acting muscarinic antagonist (SAMA)** – ipratropium via MDI device and spacer
**Long acting ß$_2$-agonist (LABA)** – formoterol via MDI device (▼medication) and spacer
– salmeterol via MDI device and spacer
**Long acting muscarinic antagonist (LAMA)** – tiotropium via Handihaler® device
**ICS +LABA combination inhalers** – suggested products:

- Fostair®▼MDI (beclometasone diproprionate/formoterol) 2 inhalations BD (unlicensed) via spacer device
- Symbicort Turbohaler 200/6 2 inhalations BD *(if inspiratory flow >60L/min)*
- Seretide Accuhaler® (fluticasone/salmeterol) 500/50 1 blisters BD (licensed)
- Seretide Evohaler® MDI (fluticasone/salmeterol) 250/25 2 inhalations BD (unlicensed) via spacer device

Where MDI inhalers are prescribed provide a spacer device and give adequate counselling on inhaler technique and use of the spacer
ICS can be used as a separate inhaler in combination with LABA (separate inhaler)
Care should be used in issuing repeat prescriptions to prevent waste. Be mindful of the quantity of doses per inhaler – some contain 100-200 inhalations e.g. salmeterol, ipratropium and formoterol MDIs whereas others are 60-120 inhalations e.g. salmeterol, Fostair®, Seretide®.
Check SPC for full licensed indications of all medicines

Medication counselling points
Ensure adequate inhaler technique and review regularly
Provide a spacer device for patients using MDI inhalers and counsel on the use of this device
Any patient on long-term high dose inhaled corticosteroids (800mcg of standard beclometasone daily or equivalent) should be provided with a steroid card
Inhaled therapy prescriptions should only be changed after input to support smoking for current smokers and review of current pattern and technique of inhaler use with further counselling

▼denotes newly licensed medicines or devices intensively monitored by the MHRA. Report ALL suspected adverse reactions via Yellow Card Scheme www.yellowcard.gov.uk

## Smoking Cessation

Offer nicotine replacement therapy (NRT), bupropion or varenicline where appropriate in line with local guidance and consider referral to quit smoking services
Islington stop smoking services can be contacted on 0207 5271234 / 08000939030 or e-mail stopsmoking@islingtonpct.nhs.uk

## EXACERBATION MANAGEMENT

Educate patients regarding symptoms of exacerbation and encourage them to report these early for early treatment
Exacerbations can be associated with:

- ↑ **breathlessness**
- ↑ sputum purulence
- ↑ sputum volume
- ↑ cough

**Initial Management of an exacerbation:**

- Increase frequency of bronchodilator use
- **Oral prednisolone (non-E/C tablets) 30mg daily** for 7 to 14 days (unless contraindicated)
- If purulent sputum – consider oral antibiotics (amoxicillin 500 milligrams TDS 7 days or doxycycline 200 milligrams stat then 100milligrams OD for 6 days)

## MRC dyspnoea scale: Grade

**0** No breathlessness
**1** Not troubled by breathlessness except on strenuous exercise
**2** Short of breath when hurrying or walking up a slight hill
**3** Walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace
**4** Stops for breath after walking about 100m or after a few minutes on level ground
**5** Too breathless to leave the house, or breathless when dressing or undressing

**OXYGEN PRESCRIBING**
Information for General Practitioners

| Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|---|---|---|---|---|
| **Who's recommended oxygen?** | **What's the indication?** | **What else is being offered?** | **How much is needed?** | **When's the review date?** |
| If oxygen has been requested by a hospital team, they can complete the HOOF & HOCF themselves in liaison with the chest team<br><br>Patients commenced on oxygen should have an initial assessment by a specialist and ABG checked | Oxygen is prescribed for hypoxaemia to improve survival - not as a treatment for breathlessness<br><br>If the patient's oxygen saturations are above 92% on room air they are unlikely to need oxygen (unless they desaturate on activity)<br><br>Complete the diagnosis on the HOOF, for example 01=COPD. A full list is on the Air Products website. | Make sure that for anyone receiving oxygen that other treatments have been offered, for example:<br><br>Smoking cessation<br><br>Pulmonary rehabilitation<br><br>Palliative care (where appropriate) | Oxygen is charged at a daily rate.<br><br>Specify flow rate and how many hours per day for each type of oxygen.<br><br>LTOT is given at home usually by oxygen concentrator for >=15 hours a day<br><br>Ambulatory oxygen is to enable those on LTOT to leave the home (or for those who desaturate on activity) | Patients receiving oxygen should be reviewed regularly.<br><br>Consider auditing your patients on oxygen and discussing their cases with a respiratory consultant or respiratory nurse.<br><br>If a patient no longer requires oxygen notify Air Products on 0800 373 580 for the equipment to be collected. |

HOOF = Home Oxygen Order Form
HOCF = Home Oxygen Consent Form
ABG = Arterial Blood Gas
LTOT = Long Term Oxygen Therapy

**Emis codes for Oxygen:**
**Home oxygen supply: 6639**
**LTOT – Long term oxygen therapy: 8776**

References
British Thoracic Society Guidelines http://www.brit-thoracic.org.uk/clinical-information.aspx
BLF Oxygen Patient Leaflet http://www.lunguk.org/you-and-your-lungs/diagnosis-and-treatment/oxygen
NICE Guidance COPD (June 2010) http://guidance.nice.org.uk/CG101
Air Products http://www.airproducts.co.uk/homecare/health_authorities/homeOxygenService/SLA.htm

NHS Islington

# GP REFERRAL TO PULMONARY REHABILITATION FOR AN ISLINGTON PATIENT

**Islington Community Pulmonary Rehabilitation Service**
**(please see Guidance on reverse)**

## PATIENT'S DETAILS

**Patient's name:** **DOB:** **Date of referral:**
**Address:**

## BASIC CLINICAL INFORMATION FOR INCLUSION IN PR PROGRAMME

**RESPIRATORY DIAGNOSIS:**
**COPD: YES / NO**
**BRONCHIECTASIS: YES / NO**
**ASTHMA: YES / NO**

**ANY EXCLUSION CRITERIA?**
**(see reverse for guidance)**
**YES / NO**

**Spirometry: $FEV_1$:_____liters FVC:_____liters**

**MRC breathlessness scale (see reverse for guidance): 1 / 2 / 3 / 4 / 5**

**SMOKING HISTORY: never / ex / current**

**On oxygen concentrator: YES / NO** **$SaO_2$ on air at rest (if known):____%**

**RELEVANT MEDICAL HISTORY/ACTIVE PROBLEMS/MEDICATION HISTORY**
**(Please fax EMIS print out with the referral)**

**English spoken? Y / N**

**Referrer's details: _____**

**I confirm that I have reviewed this patient and that he/she meets inclusion criteria and has no exclusion criteria. Signature:**
_____

**Please include GP's name and GP practice details:**

**Patient agrees to referral ☐**
**Patient's signature:_____ or Verbal consent obtained only: ☐**

**MANY THANKS FOR YOUR REFERRAL - Please note that this form must be filled out completely in order to be accepted. We will send you a confirmation of receipt of referral by fax or letter – if this does not happen within a week of referral, please contact 0844 774 6419. Awaiting list can run on a 2 month.**

## GUIDANCE FOR REFERRAL:

Pulmonary Rehabilitation (PR) is a multidisciplinary programme of care for patients with long-term respiratory conditions. The recent guidelines on the management of COPD published by the National Institute of Clinical Excellence (NICE) and the British Thoracic Society (BTS) recommend that PR should be available to all appropriate patients. The course involves a period of 8 weeks of exercise and education. The PR programme provided by Islington PCT is held at two different venues:

- Bingfield Primary Care Centre, 8 Bingfield Street (off Caledonian Road), N1 0AL, on Monday and Thursdays from 11.00am to 1.00pm
- Holloway Community Health Centre, 11 Hornsey Street, N78GG, Tuesday and Fridays, from 11.00am to 1.00pm.

**Inclusion criteria:**

- **Patient is under the care of an Islington GP**
- **Confirmed diagnosis of COPD, Bronchiectasis or Chronic Asthma (must include spirometry FEV1 and FVC)**
- **Patient is limited by breathlessness or fatigue but not housebound**
- **Medical treatment optimised and patient stable at time of referral**
- **Patient can exercise independently in a group setting with minimum supervision**
- **Able to make his or her own way to the venue (no transport available)**
- **Patient is willing to undertake exercises**

**Obs: Patients on Long term oxygen therapy will be accepted but they must bring their own ambulatory oxygen cylinder**

**Exclusions from programme:**

- **Unstable angina or cardiac disease**
- **Aortic stenosis**
- **Acute Left Ventricular Failure**
- **Uncontrolled hypertension or uncontrolled cardiac arrhythmia's**
- **Myocardial infarct within 6 weeks of referral**
- **$SaO_2$ < 92% on air at rest (if known)**
- **Patient requires 1:1 physiotherapy (refer to REACH Team)**
- **Patient has any medical problem that severely restricts exercise or compliance with the programme (eg dementia, arthritis, stroke, wheelchair bound)**

**MRC breathlessness scale – Please mark HIGHEST POSITIVE RESPONSE on the referral form:**

**grade 1** Not troubled by breathlessness except on strenuous activity
**grade 2** Short of breath when hurrying or walking up a slight hill
**grade 3** Walks slower than contemporaries on the level because of breathlessness, or has to stop for breath when walking at own pace
**grade 4** Stops for breath after walking about 100m or after a few minutes on the level.
**grade 5** Too breathless to leave the house OR breathless when dressing or undressing

Patients who attend can expect:

- To improve their fitness and feel less breathless
- Have a better understanding of their condition
- Have an improved confidence in their ability to manage their symptoms

**Please, fax or post referral to:**
**ARTI**
**NHS Islington**
**Ground Floor**
**338-346 Goswell Road London**
**EC1V 7LQ**
**FAX: 0844 774 6419**
**PHONE: 020 3316 1111**
**Arti.centralbooking@nhs.net**

**CONFIDENTIAL**

# Referral for Stop Smoking Support

This form must be **fully completed** and returned as soon as possible to:


**Post: NHS Islington**
**Public Health Department**
**Stop Smoking Service**
**338- 346 Goswell Road, EC1V 7LQ**

**E-mail: smokefree@islingtonpct.nhs.uk**

**Tel: Freephone**
**0800 093 9030**
**Admin: 0207 527 1234**

**Fax: 0207 527 1340**


**Client Information:** Please use BLOCK CAPITALS

**Name of Client:** _____

**Date of Birth:** _____ Male ❒ Female ❒

**Address:** _____

_____

**Telephone/s:** _____ **Email:** _____

**Other requirements? Language support or disability etc? Please state:**

_____

**Preferred form of contact? Phone/ Letter/ Email. Please indicate.**

**Referred by:** _____ **Organisation:** _____

**Address:** _____

**Telephone Number:** _____ **Email:** _____

**HAVE YOU GIVEN CLIENT PRINTED CLINIC AND PHARMACY DETAILS? Yes/ No**

**Please contact Stop Smoking admin if you require these.**

## I consent to NHS Islington contacting me: signature:

_____

**Office use only:**
Date form received
Client Contacted
Information sent
Staff details
Date

**Notes for Stop smoking staff:**