Colchester Hospital University NHS Foundation Trust
North East Essex Clinical Commissioning Group

Guidelines for the Management of Chronic Obstructive Pulmonary Disease (COPD)

COPD is a common, preventable and treatable condition characterised by persistent airflow limitation which is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases. Spirometry is required to make a clinical diagnosis of COPD. Treatment is aimed at immediately relieving and reducing the impact of symptoms as well as reducing the risk of future adverse events such as exacerbations.

All patients diagnosed with COPD should receive

- **Smoking Cessation** advice at **each** consultation if appropriate. See contact details below for the smoking cessation clinic.
- **Pulmonary Rehabilitation** at MRC 3 and above if symptomatic, offered **annually**
- **Spacers** for all MDIs
- Check **inhaler technique at each clinical review**
- Regular **review of compliance,** particularly before medication changes
- Referral to **COPD team** if appropriate
- Exacerbation management card offered through COPD team
- **Annual influenza vaccination**
- **Pneumococcal vaccination** once only
- **Annual pulse oximetry** for all patients , a baseline reading should be taken at diagnosis.
- Pulse oximetry if symptoms of severe exacerbation, $FEV_1 < 35\%$ predicted or clinical signs suggestive of respiratory failure/right heart failure.
- Referral to **Home Oxygen Team** once patient is stable if SaO_2 persistently ≤ 92% on breathing air.
- **Stand-by course of antibiotics and steroids** as part of a self management plan
- **Depression screening** using a validated tool as necessary
- Dietetic advice if BMI abnormal
- Consider **osteoporosis prophylaxis** for patients on long term oral steroids (Prednisolone 7.5mg daily or equivalent for longer than 3 months)
- **End of Life** care as appropriate
- **Steroid card** should be given to all patients on high dose ICS

Useful Contact numbers

- **Community COPD Team**
- **Pulmonary Rehabilitation**
- **Home Oxygen Team**

ACE gateway Tel: 0300 0032 144 referrals need to be made via email to: acecic.communitygateway@nhs.net

- **Chest Unit CHUFT,** Tel: 01206 746461 /746462 Fax: 01206 742080
- **Respiratory Nurses, CHUFT,** Tel: 01206 742261
- **Smoking Cessation, Provide,** Tel: 0300 303 9988

Potential indications for hospital admission

- Marked increase in severity of symptoms such as sudden development of resting dyspnoea
- Severe underlying COPD
- Onset of new physical signs (e.g. cyanosis, peripheral oedema)
- Failure of an exacerbation to respond to initial medical management
- Presence of serious co-morbidities (e.g. heart failure, newly occurring arrhythmias
- Frequent exacerbations
- Older age
- Insufficient home support

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Diagnosis and Classification

Diagnosis- consider a diagnosis of COPD for patients who are

- >35 yrs old **AND**
- Smokers or ex-smokers **AND**
- Have any of the following symptoms
  - exertional breathlessness
  - persistent or progressive breathlessness
  - chronic cough
  - regular sputum production
  - frequent winter "bronchitis"
  - wheeze **AND**
- Do not have clinical features of asthma

Classification of severity of airflow limitation in COPD in patients with FEV_1/FVC<0.7	
	FEV_1 Predicted
Gold 1 Mild	≥ 80%
Gold 2 Moderate	50-79%
Gold 3 Severe	30-49%
Gold 4 Very Severe	< 30%

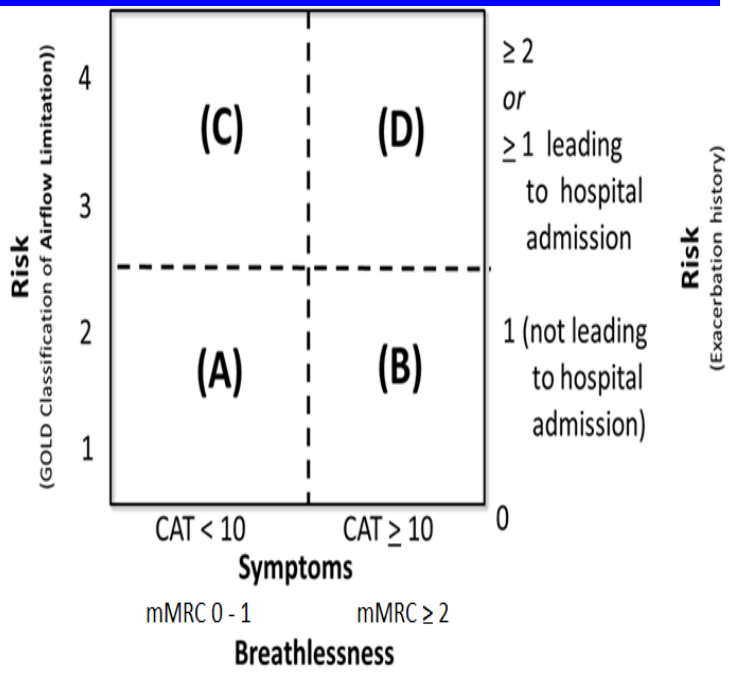
Assessment & Evaluation-

- Post bronchodilator spirometry (record absolute and % of predicted values)
- Chest X-ray
- FBC
- BMI
- Co-morbidities
- Validated questionnaire i.e.
  COPD assessment test (CAT)
- Re-assess diagnosis in view of response to treatment
- Disability can be poorly reflected in FEV_1 also consider other factors such as frequency of exacerbations, breathlessness measure (MRC scale)

The following charts should be used to assess where in the treatment pathway a patient is.
It combines symptomatic assessment, spirometry and risk exacerbations.

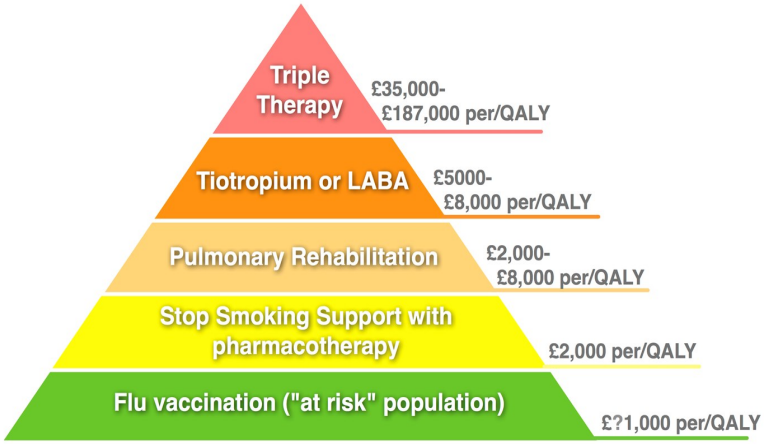
- Symptoms:
  - ◊ Less Symptoms (mMRC 0-1 or CAT <10): Patient is (A) or (C)
  - ◊ More symptoms (mMRC ≥2 or CAT ≥10): Patient is (B) or (D)
- Airflow Limitation:
  - ◊ Low Risk (GOLD 1 or 2): Patient is (A) or (B)
  - ◊ High Risk: (GOLD 3 or 4): Patient is (C) or (D)
- Exacerbations:
  - ◊ Low Risk: ≤ 1 per year and no hospitalisation for exacerbation: patient is (A) or (B)
  - ◊ High Risk: ≥ 2 per year or ≥ 1 with hospitalisation: patient is (C) or (D)

Ref: GOLD Global initiative for COPD. 2016.



Cost effectiveness of interventions for COPD

Different interventions for COPD vary in their cost effectiveness with non drug interventions often being the most effective use of resources, this is best demonstrated by the value triangle.



Management of COPD - adapted from NICE COPD pathway (updated Oct 2016), NICE TA461 (Aug 2017) & GOLD Global initiative for COPD (2016).

Formulary Choice- Choose a drug based on the person's symptomatic response, licensed indications, inspiratory flow rate, ability to use the device and preference (drugs listed in alphabetical order) delivered via the inhaled route. Prescribe by brand to avoid the incorrect device being supplied to the patient.

Short Acting Beta$_2$ Agonist (SABA) Salbutamol, Terbutaline **Long Acting Beta$_2$ Agonist (LABA)** Formoterol, Indacaterol, Salmeterol.

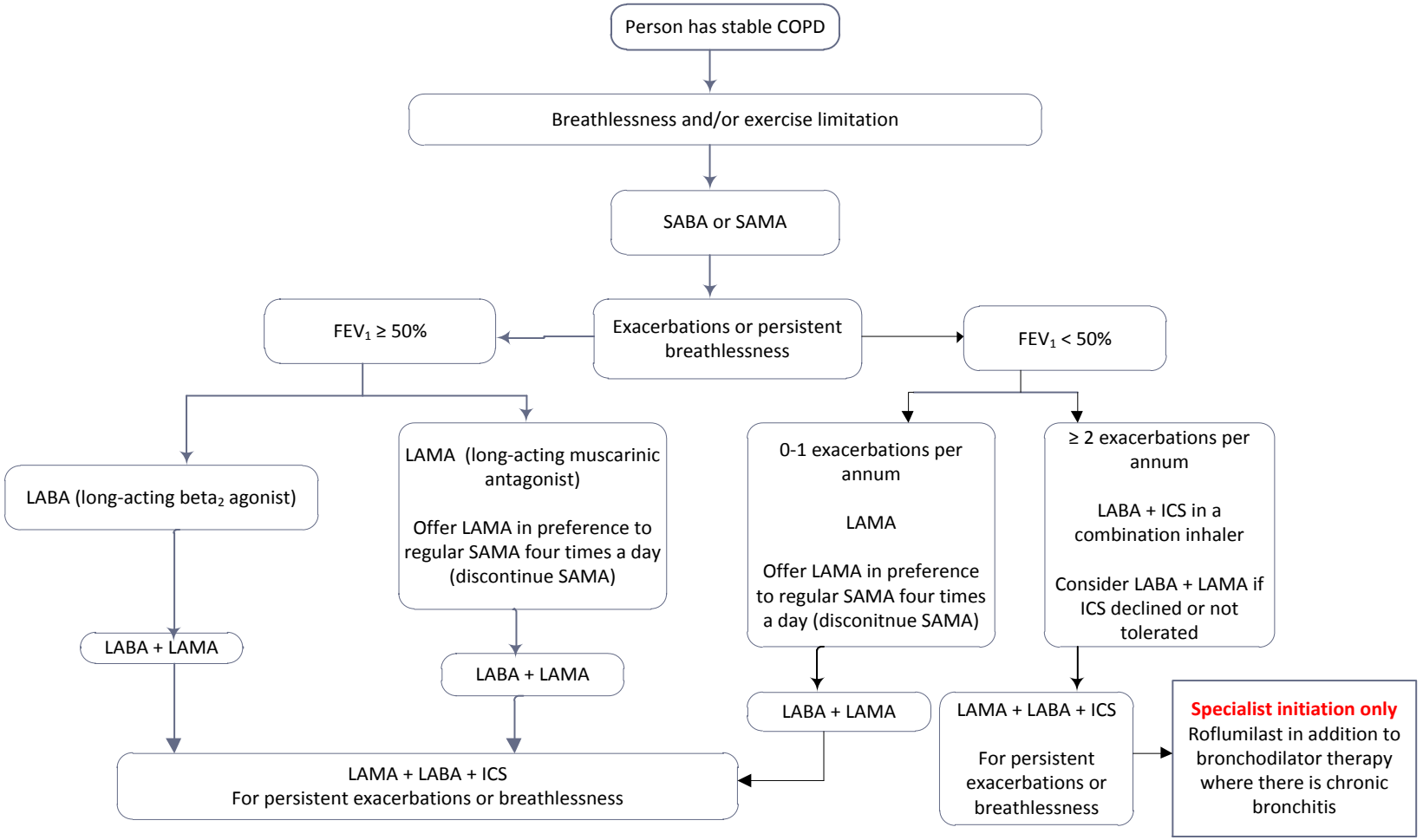
Short Acting Muscarinic Agents (SAMA) Ipratropium, **Long Acting Muscarinic Agents (LAMA)** Aclidinium, Glycopyrronium, Tiotropium, Umeclidinium

LABA/LAMA Combination Formoterol /Aclidinium, Indacaterol/Glycopyrronium, Olodaterol/Tiotropium, Vilanterol/Umeclidinium.

LABA + ICS Combination **MDI 1st line** Beclometasone/Formoterol (>18 years old) **DPI 1st line** Fluticasone/Salmeterol; Budesonide/Formoterol

2nd line (DPI) Fluticasone Furoate/Vilanterol 92mcg+ 22mcg only.

Where a change in treatment is required, it is preferable to use the same device where possible.



Other Medications:

- Theophylline - Offer only after trials of short- and long-acting bronchodilators or to people who cannot use inhaled therapy. Prescribe by brand.
- Carbocisteine - Consider in people with a chronic productive cough and continue use if symptoms improve. Do not routinely use to prevent exacerbations.

Acute Exacerbations, Rescue Pack:

Amoxicillin 500mg tds for 5 days **OR** Doxycycline 200mg stat then 100mg daily over 5 days .

In exceptional circumstances a 7 day course of antibiotics may be appropriate. These patients will be under specialist respiratory care.

PLUS Prednisolone 30mg daily (NOT EC) for 7-14 days only **THEN STOP**

CAUTION patients receiving oxygen should not be prescribed ANY emollients containing liquid paraffin due to fire risk. Nutraplus 10% would be a suitable **product for these patients**