

(To be read in conjunction with the Wirral COPD Supplementary Information)

STEP 1: Assess symptoms

COPD Assessment Test (CAT) [[Link for CAT-test Online](#)] is a patient-completed instrument that is a comprehensive measure of symptoms and complements existing approaches to assessing COPD. *Determine whether patient has less symptoms (<10) or more symptoms (>10) if using CAT scale.*

Assess **MRC (Medical Research Council Questionnaire)** providing an assessment of impact of dyspnoea. *Determine if the patient is less breathlessness (1-2) or more breathlessness (≥ 3). (See appendix 1)*



STEP 2: Assess risk of exacerbations by the following assessment:

- Assess the number of **exacerbations** the patient has had within the previous 12 months
- Determine whether the patient has had one or more **hospitalisation** in the previous year for a COPD exacerbation
- Use **spirometry** to determine if patient is high risk (FEV1 <50%) or low risk (FEV1 \geq 50%)

In some patients these three ways of assessing the risk of exacerbations will not lead to the same level of risk; in this case, the risk should be determined by whichever assessment indicates the highest risk.



Determine GOLD Classification and treatment according to Table 1

(GOLD: Global initiative for chronic Obstructive Lung Disease)

Table 1: GOLD Classification & Respective Drug Treatment

Patients can start in any classification and can migrate between groups in any direction, therefore regular assessment is essential.

In some patients the three ways of assessing the risk of exacerbations (exacerbations, hospitalisation and FEV₁) will not lead to the same level of risk; in this case, the risk should be determined by whichever assessment indicates the HIGHEST risk.

(See Appendix 2 – for a list of inhaler brands, dosing, costs & images)				STEP 1: SYMPTOM ASSESSMENT	
				CAT <10	CAT ≥10
STEP 2: RISK ASSESSMENT	EXACERBATIONS	HOSPITALISATION	FEV ₁	MRC 1-2	MRC ≥3
	Number of Exacerbations in previous 12 months	Hospitalisation for respiratory episode in previous 12 months			
	≤ 1	zero	≥ 50% Predicted	<p><u>Low risk – GOLD A</u> <i>Few symptoms and low risk of exacerbations</i></p> <p>SABA or SAMA prn</p> <p><i>(N.B. SABA can continue as reliever through all GOLD categories)</i></p>	<p><u>Moderate risk – GOLD B</u> <i>More significant symptoms and low risk of exacerbations</i></p> <p>First Choice: LAMA or LABA</p> <p>Alternative Choice: LABA or LAMA+LABA</p> <p><i>(N.B. stop SAMA if commenced on LAMA)</i></p>
≥ 2	≥1	< 50% Predicted	<p><u>Severe risk – GOLD C</u> <i>Fewer exacerbations and no hospital admissions</i> LAMA+LABA</p> <p>≥2 exacerbations and/or one hospital admission LAMA (if LAMA naïve) or LABA+ICS (if LAMA tried)</p> <p><i>(N.B. if ICS to be added to LAMA+LABA; change to LABA+ICS combination inhaler and individual LAMA inhaler with device consistency if possible)</i></p>	<p><u>Very Severe risk – GOLD D</u> <i>Many symptoms and high risk of exacerbations</i></p> <p>LABA+ICS and LAMA or LAMA+LABA</p>	

Inhaler choices for management of stable patients – try to maintain device consistency if possible.

Please refer to Appendix 2 for pictures to aid identification of inhalers

	SABA	SAMA	LABA	LAMA	LAMA+LABA	LABA+ICS
1 st Line	Salbutamol 100mcg 1. Salbutamol (MDI) 2. Easyhaler (DPI) 3. Easibreathe (MDI) Dose: 2 puffs when required for breathlessness	Ipratropium 20mcg (MDI) Dose: 1 puff, up to four times a day	Formoterol 12mcg Easyhaler (DPI) Dose: 1 puff Twice daily	Tiotropium Spiriva Respimat 2.5mcg (MDI) Dose: 2 puffs Once daily Braltus Zonda Inhaler 10mcg (DPI) Dose: 1 puff Once daily	Acclidinium 340mcg + Formoterol 12mcg Duaklir Genuair (DPI) Dose: 1 puff Twice daily Glycopyrronium 43mcg + Indacaterol 85mcg Ultibro Breezhaler (DPI) Dose: 1 puff Once daily	Formoterol 9mcg + Budesonide 320mcg DuoResp Spiromax(DPI) Dose: 1 puff Twice daily Licensed for FEV1 < 70%** Formoterol 6mcg + Beclometasone 100mcg Fostair(MDI) Dose: 2 puffs Twice daily
2 nd Line	Terbutaline 500mcg Bricanyl Turbohaler (DPI) Dose: 1 puff when required for breathlessness		Salmeterol Salmeterol 25mcg MDI Dose: 2 puffs Twice daily	Glycopyrronium 44mcg Seebri Breezhaler (DPI) Dose: 1 puff Once daily Acclidinium 322mcg Eklira Genuair (DPI) Dose: 1 puff Twice daily	Tiotropium 2.5mcg + Oldaterol 2.5mcg Spiolto Respimat (MDI) Dose: 2 puffs Once daily Umeclidinium 55mcg + Vilanterol 22mcg Anoro Ellipta (DPI) Dose: 1 puff Once daily	Vilanterol 22mcg + Fluticasone 92mcg Relvar Ellipta (DPI) Dose: 1 puff Once daily Licensed for FEV1 < 70%**
3 rd Line				Umeclidinium 55mcg Incruse Ellipta (DPI) Dose: 1 puff Once daily	<i>No order is given for this class – try to maintain device consistency</i>	Salmeterol 50mcg + Fluticasone 500mcg AirFluSal Forspiro (DPI) Dose: 1 puff Twice daily Licensed for FEV1 < 60%**

SABA: Short-Acting Beta2 Agonist.

SAMA: Short-Acting Muscarinic Antagonist.

LABA: Long Acting Beta2 Agonist.

LAMA: Long Acting Muscarinic Antagonist.

ICS: Inhaled Corticosteroid.

DPI: Dry Powder Inhaler.

MDI: Metered Dose Inhaler.



****Most LABA/ICS inhalers are licensed for use with FEV1 <50%**

Appendix 1 - MRC – Medical Research Council Questionnaire

Grade	Description of Breathlessness
1	I only get breathless with strenuous exercise.
2	I get short of breath when hurrying on level ground or walking up a slight hill.
3	On level ground, I walk slower than people of the same age because of breathlessness, or have to stop for breath when walking at my own pace.
4	I stop for breath after walking about 100 yards or after a few minutes on level ground.
5	I am too breathless to leave the house or I am breathless when dressing.

Appendix 2 – Inhaler Profiles

Prescribe all combination inhalers by **Brand Name**

	Drug	Strength	Brand	Picture	Device Type	Dose/Frequency	Cost**
SABA	Salbutamol	100mcg	Salbutamol (generic)		MDI	2 puffs when required for breathlessness	£1.50 (200 doses)
			Salbutamol Easyhaler		DPI		£3.31 (200 doses)
			Salbutamol Easibreathe		MDI		£6.30 (200 doses)
	Terbutaline	500mcg	Bricanyl Turbohaler		DPI	1 puff when required for breathlessness	£6.92 (100 doses)
SAMA	Ipratropium	20mcg	Atrovent		MDI	1 puff, up to four times a day	£5.56 (200 doses)
LABA	Formoterol	12mcg	Easyhaler Formoterol		DPI	1 puff Twice daily	£23.75 Device will last two months (120 doses)
	Salmeterol	25mcg	Salmeterol (generic)		MDI	2 puffs Twice daily	£29.26 (120 doses)
LAMA (cont.)	Tiotropium	10mcg	Braltus Zonda Inhaler & Caps		DPI	1 puff Once daily	£23.22 (30 doses)
		2.5mcg	Spiriva Respimat		MDI	2 puffs Once daily	£33.50 (60 doses)
	Glycopyrronium	44mcg	Seebri Breezhaler & Caps		DPI	1 puff Once daily	£27.50 (30 doses)
LAMA	Acclidinium	322mcg	Eklira Genuair		DPI	1 puff Twice daily	£28.60 (60 doses)

	Umeclidinium	55mcg	Incruse Ellipta		DPI	1 puff Once daily	£27.50 (30 doses)
LAMA+LABA	Acclidinium + Formoterol	340mcg + 12mcg	Duaklir Genuair		DPI	1 puff Twice daily	£32.50 (60 doses)
	Glycopyrronium bromide + Indacaterol	43mcg + 85mcg	Ultibro Breezhaler & Caps		DPI	1 puff Once daily	£32.50 (30 doses)
	Oldaterol + Tiotropium	2.5mcg + 2.5mcg	Spiolto Respimat		MDI	2 puffs Once daily	£32.50 (60 doses)
	Umeclidinium + Vilanterol	55mcg + 22mcg	Anoro Ellipta		DPI	1 puff Once daily	£32.50 (30 doses)
LABA+ICS	Formoterol + Budesonide	9mcg + 320mcg	DuoResp Spiromax		DPI	1 puff Twice daily	£29.97 (60 doses)
	Formoterol + Beclometasone	6mcg + 100mcg	Fostair		MDI	2 puffs Twice daily	£29.32 (120 doses)
	Vilanterol + Fluticasone	22mcg + 92mcg	Relvar Ellipta (FEV ₁ <70%)		DPI	1 puff Once daily	£22.00 (30 doses)
	Salmeterol + Fluticasone	50mcg + 500mcg	AirFluSal Forspiro (FEV ₁ <60%)		DPI	1 puff Twice daily	£32.74 (60 doses)

** Prices taken from MIMS online and Drug Tariff online accessed Feb 2016
\$Appearance of generic salmeterol inhalers may vary depending on manufacturer

Spacer Devices: There are various spacer devices available on the market - it is important to prescribe a spacer device that is compatible with the prescribed MDI (see individual [Summary of Product Characteristics](#)).

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