

Co. Durham & Darlington Respiratory Network COPD Treatment Guide

Age > 35, Productive cough, Breathless, Smoking Hx, other risk factors

Spirometry (post-bronchodilator) CXR, Fbc (See local guideline)

FEV₁/FVC ratio < 0.70
(Consider asthma if childhood onset, diurnal variability, atopy, wheeze)

GOLD Classification of Airflow Limitation in COPD

In patients with post bronchodilator FEV₁/FVC < 0.70

GOLD 1	Mild	FEV ₁ ≥ 80% predicted
GOLD 2	Moderate	50% ≤ FEV ₁ < 80% predicted
GOLD 3	Severe	30% ≤ FEV ₁ < 50% predicted
GOLD 4	Very Severe	FEV ₁ < 30% Predicted

Look for reduction in annual spirometry values & consider cause

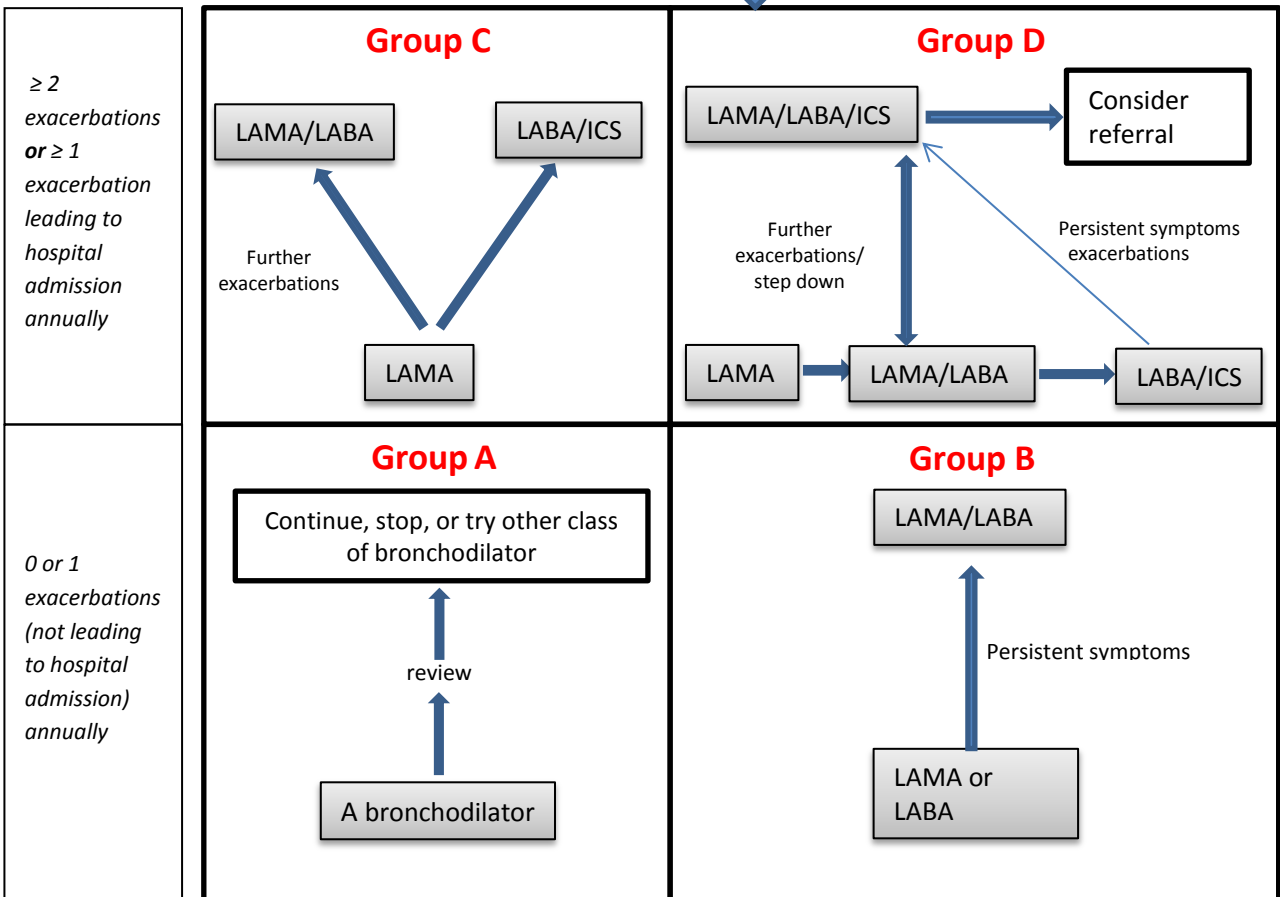
COPD

Patient information & education
BLF- First steps to living with COPD
-Living with COPD

Intensive smoking cessation support
Vaccination- Flu & Pneumococcal
Pulmonary Rehabilitation/Exercise

Treatment Goals
Reduce Symptoms & Exacerbations
Manage Comorbidities

Check CAT score, Exacerbation history, then use grid to determine treatment



How is your COPD? Take the COPD Assessment Test TM (CAT)

SCORE

I never cough	0 1 2 3 4 5	I cough all the time	
I have no phlegm (mucus) in my chest at all	0 1 2 3 4 5	My chest is completely full of phlegm (mucus)	
My chest does not feel tight at all	0 1 2 3 4 5	My chest feels very tight	
When I walk up a hill or one flight of stairs I am not breathless	0 1 2 3 4 5	When I walk up a hill or one flight of stairs I am very breathless	
I am not limited doing any activities at home	0 1 2 3 4 5	I am very limited doing activities at home	
I am confident leaving my home despite my lung condition	0 1 2 3 4 5	I am not at all confident leaving my home because of my lung condition	
I sleep soundly	0 1 2 3 4 5	I don't sleep soundly because of my lung condition	
I have lots of energy	0 1 2 3 4 5	I have no energy at all	
TOTAL SCORE			

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Grade	Degree of breathlessness related to activities - MRC
1	Not troubled by breathlessness except on strenuous exercise
2	Short of breath when hurrying on the level or walking up a slight hill
3	Walks slower than most people on the level, stops after a mile or so, or stops after 15 minutes walking at own pace.
4	Stops for breath after walking about 100yards or after a few minutes on level ground
5	Too breathless to leave the house, or breathless when undressing

Refer patients to British Lung Foundation for information and support

BLF Helpline 03000 030 555 www.blf.org.uk/COPD

Approved CD&D APC May 2018

Review due May 2020

- Smoking cessation support & vaccination are the most important interventions
- Discuss inhaler type & check inhaler technique & compliance at each visit.
- Inhaler Technique Assessment Tools, e.g. *In-Check*® device should be used if available to support patients and clinicians with technique and device selection.
- Pulmonary rehab improves symptoms, quality of life & reduces admissions. Offer to all patients with MRC >3 or patients with MRC of 2 and CAT score of >10.
- Monitor oxygen saturation: refer if SaO2 <92% on one or more occasion at rest or de-saturation on exercise
- Screen for co-morbidities- anxiety/depression, CVD, skeletal muscle dysfunction, osteoporosis, lung cancer, BMI, OSA
- Annual Review- assess severity - check post bronchodilator spirometry, CAT score, exacerbation frequency along with BP, pulse, BMI, oxygen sats, MRC; then check GOLD category; review inhaler treatment, technique & compliance; discuss self-management plans, consider rescue packs for those who exacerbate, review co-morbidities
- Escalate medication up & down as required. Consider ICS stepdown if no PH asthma, no exacerbation in last year, normal eosinophil count. Review after 1 month. Do not stop ICS if patient has asthma, although ICS dose reduction can be trialed
- Rescue Pack- prednisolone 40mg daily for 5 days, amoxicillin or doxycycline for 5-7 days (GOLD 2018)
- Refer for chest x-ray where clinically appropriate if exacerbation not improving.
- Mucolytics - may improve cough & difficulty with expectoration. Review and stop after 1 month if no benefit obtained from their use.
- Weight - Support patient to maintain BMI 20-25 range. If BMI < 20 may need dietary support.

County Durham & Darlington COPD Formulary Inhaler Choice – March 2018

Adrenoreceptor Agonist Bronchodilators

Short-acting: (SABA)

1st Choice = salbutamol (Ventolin Evohaler MDI – or Salbutamol Easyhaler DPI)

Alternative = terbutaline






Ipratropium is no longer recommended - replaced by LAMA. Nebulisers do not offer convincing advantages over metered dose inhalers given via a spacer device and are not routinely recommended.

Long-acting: (LABA)





1st Choice = formoterol






Alternative = salmeterol

Formoterol acts most quickly, salmeterol is alternative



LAMA					
	Tiotropium	Glycopyrronium	Umeclidinium	Aclidinium	Tiotropium
Brand name	Braltus®	Seebri® Breezhaler®	Incruse Ellipta®	Eklira Genuair®	Spiriva Respimat
Device	Dry powder (capsule)	Dry powder (capsule)	Dry powder (multidose)	Dry powder (multi-dose)	Solution for inhalation cartridge
					
Adult COPD dose	Inhalation of the contents of one 13 microgram (equivalent delivered dose of 10microgram – the same as Spiriva) capsule once daily with the Zonda® inhaler device at the same time of day.	Inhalation of the contents of one 50 microgram capsule once daily with the Seebri® Breezhaler® device at the same time of day.	The recommended dose is one 55 microgram inhalation once daily , at the same time of day	The recommended dose is one 322 microgram inhalation twice daily	The recommended dose is two 2.5 micrograms inhalations once daily at the same time of day.
Steps to use the inhaler – ease of use	7 step process <ul style="list-style-type: none"> Remove capsule from capsule pot Load capsule into inhaler Pierce capsule Inhale powder Hold breath for 10 seconds Repeat inhalation Dispose of capsule 	7 Step process <ul style="list-style-type: none"> Remove capsule from blister pack Load capsule into inhaler Pierce capsule Inhale powder Check capsule empty Repeat inhalation if necessary Dispose of capsule 	3 step process <ul style="list-style-type: none"> Slide down cover to load dose “Click” heard when dose loaded Inhale dose Replace cover <p>Indicator shows remaining inhalations</p>	4 step process <ul style="list-style-type: none"> Remove cap Press and release button to load dose Inhale dose Replace cap <p>Indicator shows successful inhalation –repeat if necessary</p>	4 step process then repeat <ul style="list-style-type: none"> Turn the clear base in the direction of the label until it clicks (half a turn) Open the cap until it snaps fully open Whilst inhaling press the dose-release button and continue to inhale. Hold breath for 10 seconds Repeat steps for second dose Close cap once finished
Miscellaneous information	New inhaler with each pack of capsules – no cleaning. Clear capsules – allows patient to see that dose has been taken.	Powder taste and inhaler sound show inhaler working New inhaler with each pack of capsules – no cleaning	Dose counter No need to wash In use shelf-life = 6 weeks	Dose counter Locks closed when empty No need to wash	Dose indicator – notifies when 7 days’ supply left Locks when empty Clean once a week In use shelf life = 3 months
Cost	££	££	££	££	£

LAMA/LABA

	Acclidinium / Formoterol	Umeclidinium / Vilanterol	Glycopyrronium / Indacaterol	Tiotropium/Olodaterol
Brand name	Duaklir Genuair®	Anoro Ellipta®	Ultibro Breezhaler®	Spolto Respimat®
Device	Dry powder inhaler	Dry powder inhaler	Dry powder (capsule)	Solution for inhalation cartridge
				
Adult COPD dose	The recommended dose is one 340 / 12 microgram inhalation twice daily.	The recommended dose is one 55 / 22 microgram inhalation once daily.	Inhalation of the content of one 85 / 43 microgram capsule once daily using the Ultibro Breezhaler inhaler.	The recommended dose is two 2.5 / 2.5 microgram inhalations once daily.
Steps to use the inhaler – ease of use	<p>4 step process</p> <ul style="list-style-type: none"> Remove cap Press and release button to load dose Inhale dose Replace cap <p>Indicator shows successful inhalation – repeat if necessary</p>	<p>3 step process</p> <ul style="list-style-type: none"> Slide down cover to load dose, “Click” heard when dose loaded Inhale dose Replace cover <p>Indicator shows remaining inhalations</p>	<p>7 Step process</p> <ul style="list-style-type: none"> Remove capsule from blister pack Load capsule into inhaler Pierce capsule Inhale powder Check capsule empty Repeat inhalation if necessary Dispose of capsule 	<p>4 step process then repeat</p> <ul style="list-style-type: none"> Turn the clear base in the direction of the label until it clicks (half a turn) Open the cap until it snaps fully open Whilst inhaling press the dose-release button and continue to inhale. Hold breath for 10 seconds Repeat steps for second dose Close cap once finished
Miscellaneous information	Dose counter Locks closed when empty No need to wash	Dose counter No need to wash In use shelf-life = 6 weeks If the inhaler cover is opened and closed without inhaling the dose, the dose will then be lost but securely held inside the inhaler	Powder taste and inhaler sound show inhaler working New inhaler with each pack of capsules – no cleaning	Dose indicator – notifies when 7 days' supply left Locks when empty Clean once a week In use shelf life = 3 months
Cost	£££	£££	£££	£££

Corticosteroid/LABA					
	Fluticasone furoate / Vilanterol	Beclometasone / Formoterol	Beclometasone / Formoterol	Budesonide / Formoterol	
Brand name	Relvar Ellipta®	Fostair®	Fostair NEXThaler®	DuoResp Spiromax®	Symbicort Turbohaler
Device	Dry powder	MDI	Dry powder	Dry powder	Dry Powder
					
Adult COPD dose	The recommended dose is one inhalation of 92/22 mcg once daily at the same time each day. Relvar Ellipta®184/22 mcg is not indicated for patients with COPD.	The recommended dose is two 100/6 microgram inhalations twice a day – recommended to use via AeroChamber Plus spacer device	The recommended dose is two inhalations of 100/6 mcg twice daily. Fostair NEXThaler® 200/6 mcg is not indicated for patients with COPD	The recommended dose is two inhalations twice daily of 160/4.5 mcg or One inhalation twice daily of 320/9mcg	The recommended dose is two inhalations twice daily of 200/6 mcg or One inhalation twice daily of 400/12mcg
Steps to use the inhaler – ease of use	3 step process <ul style="list-style-type: none"> Slide down cover to load dose. “Click” heard when dose loaded Inhale dose Replace cover Indicator shows remaining inhalation	5 step process <ul style="list-style-type: none"> Remove cap Begin to inhale, press down on the canister to release a dose Hold breath for as long as comfortably possible Repeat for second dose Replace cap 	5 step process <ul style="list-style-type: none"> Open the cover fully to prepare the dose Inhale dose Hold breath for 5-10 seconds Repeat for second dose Replace cover fully once finished Indicator shows successful inhalation	5 step process <ul style="list-style-type: none"> Open the mouthpiece until a click is heard Breathe in forcefully and deep through the mouthpiece to inhale dose Hold breath for 10 seconds or as long as comfortably possible Repeat if necessary Close mouthpiece 	5-step process <ul style="list-style-type: none"> Remove cover and turn red grip as far as it will go in both directions Breathe in forcefully and deep through the mouthpiece to inhale dose Hold breath for 10 seconds or as long as comfortably possible and Breathe out gently Repeat if necessary Replace cover
Miscellaneous information	Inhaler is in 'closed' position when first removed from sealed tray Has a "discard by" date 6 weeks from the date of opening the tray. If the inhaler cover is opened and closed without inhaling the dose, the dose will then be lost. The lost dose will be securely held inside the inhaler, but it will no longer be available to be inhaled.	Stored in the fridge (before dispensing only) shelf life of 5 months after dispensing (out of fridge). New single dose counter. Suitable for use with the AeroChamber Plus spacer device. Small particle size – 100mcg dose is not bioequivalent to 100mcg BDP in other inhalers.	Shelf life of 6 months once opening the pouch. The dose will only be available for inhalation if the cover is fully opened. The patient should be advised to close the cover fully when not in use.	160/4.5 mcg is equivalent to a metered dose of 200 mcg budesonide /6 mcg of formoterol fumarate dihydrate. 320/9 mcg is equivalent to a metered dose of 400 mcg budesonide/12 mcg of formoterol fumarate dihydrate Doesn't require priming.	Must be primed before first use. Dose indicator shows when <20 and <10 doses remaining.
Cost	£	££	££	££	££

Corticosteroid/LAMA/LABA –“Triple Therapy”

	Beclometasone /Formoterol/Glycopyrronium	Fluticasone Furoate/Umeclidinium/Vilanterol
Brand name	Trimbow	Trelegy Ellipta
Device	MDI	Dry powder
		
Adult COPD dose	The recommended (and maximum) dose is two inhalations of 87/5/9 micrograms twice daily.	The recommended (and maximum) dose is one inhalation of 92/55/22 micrograms once daily, at the same time each day.
Steps to use the inhaler – ease of use	<p>5 step process</p> <ul style="list-style-type: none"> Remove cap Begin to inhale, press down on the canister to release a dose Hold breath for as long as comfortably possible Repeat after 30 seconds for second dose Replace cap <p>Indicator shows remaining inhalations</p>	<p>3 step process</p> <ul style="list-style-type: none"> Slide down cover to load dose. “Click” heard when dose loaded Inhale dose Replace cover <p>Indicator shows remaining inhalations</p>
Miscellaneous information	<ul style="list-style-type: none"> Stored in the fridge (before dispensing only) shelf life of 4 months after dispensing (out of fridge) suitable for use with the AeroChamber Plus spacer device. Single dose counter. Small particle size – therefore is not bioequivalent to same dose of BDP in other inhalers. 	<ul style="list-style-type: none"> Inhaler is in 'closed' position when first removed from sealed tray Has a "discard by" date 6 weeks from the date of opening the tray. If the inhaler cover is opened and closed without inhaling the dose, the dose will then be lost. The lost dose will be securely held inside the inhaler, but it will no longer be available to be inhaled.
Cost	£££	£££

Costing scale: £ = <£25.00, ££ = £25.00 to £30.00, £££ = >£30.00

BEFORE INITIATION of Triple Therapy consider the clinical need for Inhaled Corticosteroids (ICS)

- Regular treatment with ICS increases the risk of oral candidiasis, hoarse voice, skin bruising and pneumonia.
- ICS treatment is only recommended for patients with COPD who exacerbate 2 or more times annually *or* where one or more exacerbations leads to a hospital admission [GOLD 2018]