

Update on COPD Management

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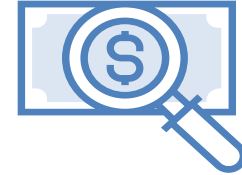
Overview



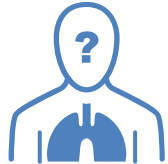
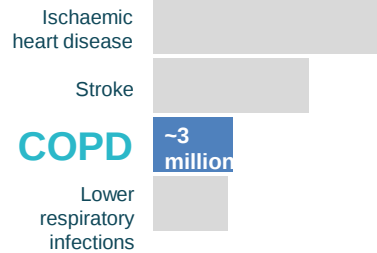
~384 million have COPD globally¹



COPD direct costs are estimated to be
€38.6 billion in the EU¹



COPD is the
third leading
cause of death
worldwide¹⁰



Up to **70%** of COPD may be
undiagnosed²



The majority of COPD costs are attributed to
exacerbations³⁻⁹

1. GOLD. Global strategy for the diagnosis, management, and prevention of COPD: as of 2022 report. <https://goldcopd.org> (last accessed January 2023); 2. Diab N et al. Am J Respir Crit Care Med. 2018;198:1130–1139; 3. Qureshi H et al. Ther Adv Chronic Dis. 2014;5:212–227; 4. Press VG et al. Curr Opin Pulm Med. 2018;24:138–146; 5. Celli BR et al. Eur Respir J. 2004;23:932–946; 6. Toy EL et al. COPD. 2010;7:214–228; 7. Anzueto A. Eur Respir Rev. 2010;19:113–118; 8. Geppona M et al. Respir Med. 2011;105:402–409; 9. Perera PN et al. COPD. 2012;9:131–141; 10. WHO. The top 10 causes of death. <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>. (last accessed January 2023)

COPD is second biggest cause of respiratory death in Ireland¹

In 2020 there were:

- ▶ ~13,000 hospitalisations³
- ▶ ~1,500 COPD deaths → 4 deaths per day from COPD^{2,3}

More deaths than any non-respiratory cancer and Ireland's fourth biggest killer¹

Overview



74 year old
male, heavy
smoker

Dyspnoea that is

Progressive

Recurrent wheeze

Persistent

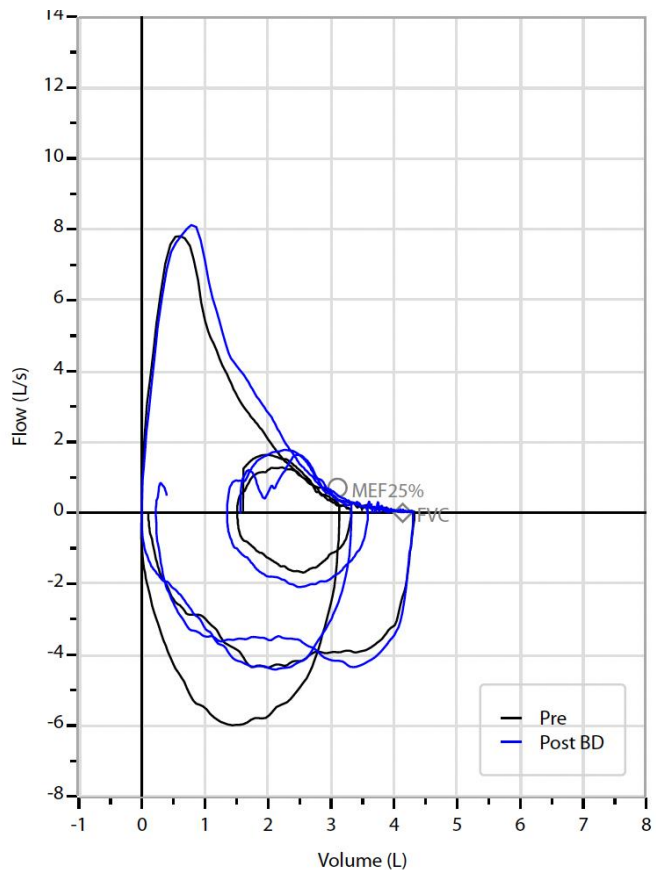
Chronic cough

Exertional

Recurrent chest
infections



PFTs

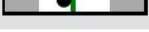


PRE

		Meas.	Normal Range	Pred	% Pre	z score
FVC	L	4.33	3.10 - 5.18	4.13	105	0.30
FEV1	L	2.69	2.32 - 3.96	3.17	85	-0.95
FEV1/FVC%	%	62.2	63.9 - 88.2	76.8	81	-1.84
PEF	L/s	8.13	---	-	-	-
FEF25-75%	L/s	1.11	1.15 - 4.42	2.52	44	-1.70
MEF25%	L/s	0.31	0.27 - 1.76	0.71	43	-1.43
MEF50%	L/s	1.67	---	-	-	-
MEF75%	L/s	4.76	---	-	-	-
FEV1/VCmax%	%	60.2	63.9 - 88.2	76.8	78	-2.07

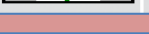
THORACIC GAS VOLUME/RAW

Test Time

		Meas.	Normal Range	Pred	% Pred	z score
TLC(Pleth)	L	7.12	5.63 - 7.93	6.78	105	0.49 
RV(Pleth)	L	2.65	1.82 - 3.17	2.49	106	0.39 
FRC(Pleth)	L	3.58	2.58 - 4.55	3.56	101	0.03 
RV/TLC(Pleth)	%	37.3	30.7 - 48.7	39.7	94	-0.45 

DIFFUSING LUNG CAPACITY (SINGLE BREATH)

Test Time

		Meas.	Normal Range	Pred	% Pred	z score
DLCO unadj	mL/min/mmHg	14.58	---	-	-	-
DLCO corr	mL/min/mmHg	14.56	18.67 - 32.96	25.20	58	-2.87 
VA	L	6.14	4.92 - 7.37	6.10	101	0.06 
KCO	mL/min/mmHg/L	2.37	3.11 - 5.30	4.16	57	-2.91 

PFT lab accepts direct referrals, wait time ~ 3/52

Assessing Symptoms...



Your name:

Today's date:

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

This questionnaire will help you and your healthcare professional measure the impact COPD (Chronic Obstructive Pulmonary Disease) is having on your wellbeing and daily life. Your answers, and test score, can be used by you and your healthcare professional to help improve the management of your COPD and get the greatest benefit from treatment.

For each item below, place a mark (X) in the box that best describes you currently. Be sure to only select one response for each question.

Example: I am very happy (0) **X** (1) (2) (3) (4) (5) I am very sad

mMRC	Breathless on....
0	Strenuous exercise
1	Hurrying/going up slight hill
2	Keeping up with people of same age or walking at my own pace
3	On walking 100m or few mins (need a rest)
4	Leaving the house or dressing

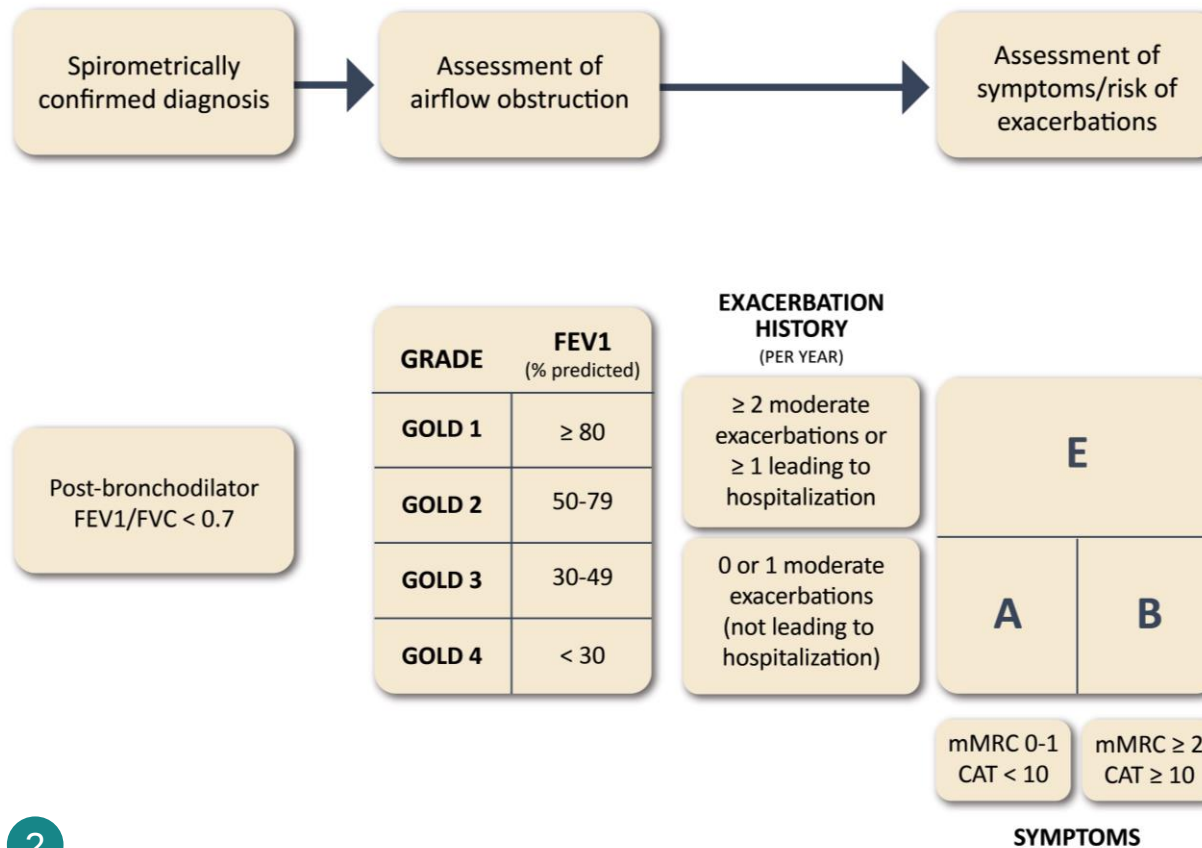
I never cough	(0) (1) X (2) (3) (4) (5)	I cough all the time	SCORE 3
I have no phlegm (mucus) in my chest at all	(0) (1) X (2) (3) (4) (5)	My chest is completely full of phlegm (mucus)	2
My chest does not feel tight at all	(0) (1) (2) X (3) (4) (5)	My chest feels very tight	3
When I walk up a hill or one flight of stairs I am not breathless	(0) (1) X (2) (3) (4) (5)	When I walk up a hill or one flight of stairs I am very breathless	2
I am not limited doing any activities at home	(0) (1) (2) (3) X (4) (5)	I am very limited doing activities at home	4
I am confident leaving my home despite my lung condition	(0) (1) (2) X (3) (4) (5)	I am not at all confident leaving my home because of my lung condition	3
I sleep soundly	(0) (1) (2) X (3) (4) (5)	I don't sleep soundly because of my lung condition	3
I have lots of energy	(0) (1) X (2) (3) (4) (5)	I have no energy at all	2
			TOTAL SCORE 22

COPD Assessment Test and CAT logo is a trademark of the GlaxoSmithKline group of companies. © 2009 GlaxoSmithKline. All rights reserved.

RES/QST/09/43163/1 Date of preparation: September 2009.

GOLD ABE Assessment Tool

Figure 2.10



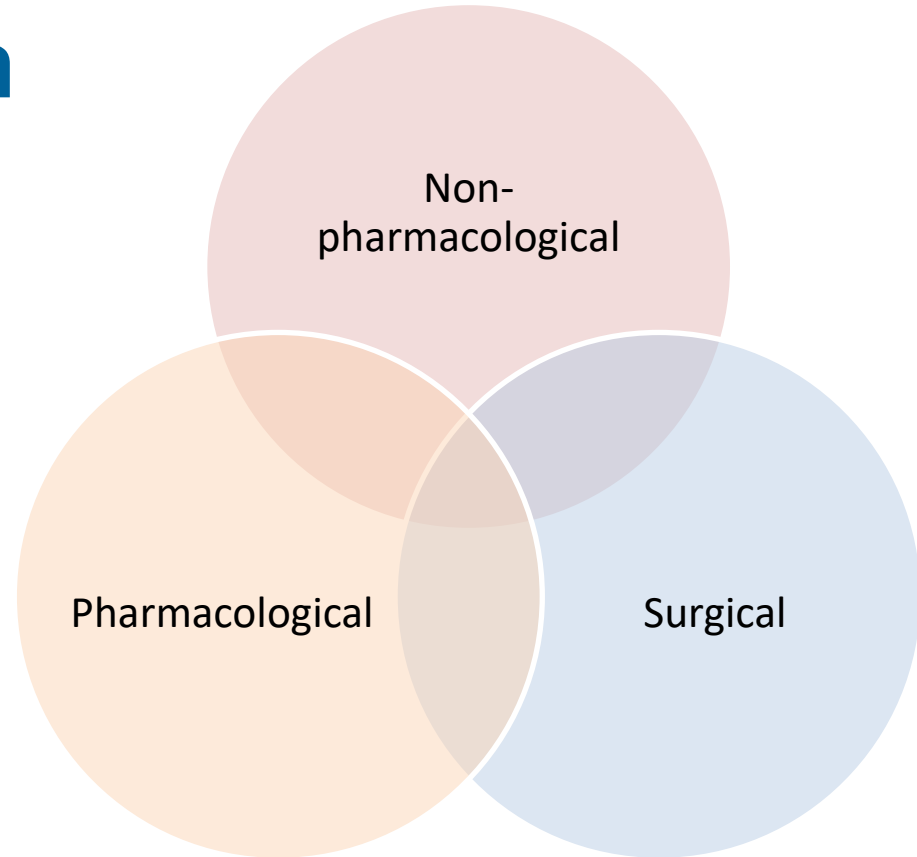
Overview



COPD Management in General

Management

3



Smoking cessation

- Online referral process – self or HCP referrals accepted
- NRT – 4 times more likely to quit



QUIT

Who said cigarette kills ?

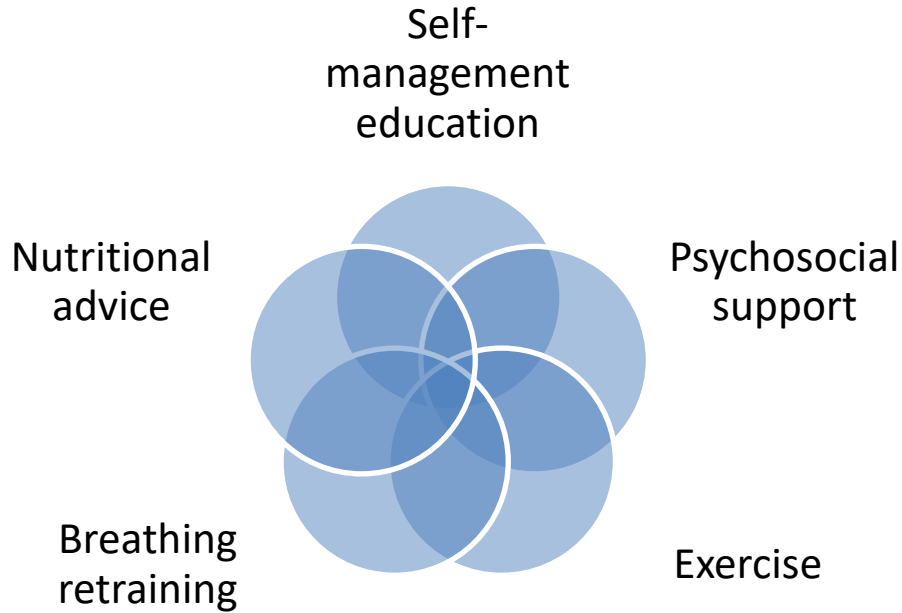


I'm 48 and still feeling good.

Pulmonary Rehabilitation

Management

3



Improves QoL

Improves exercise capacity

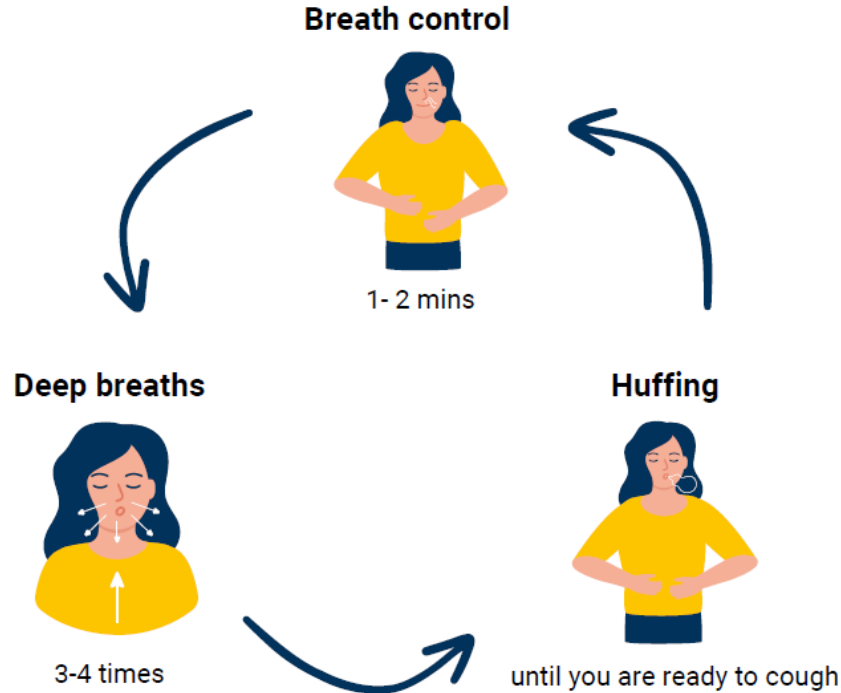
Improves survival

Pulmonary rehabilitation referrals accepted from resp consultant, CNS and GPs
Waiting list ~ 3/12, urgent referrals can be prioritised

Chest Physiotherapy

Management

3



Nebulisers

Manage Hydration

PEP device

Airway clearance clinic wait time
~ 4 - 8/52

Initial Pharmacological Treatment

Figure 3.7



*Single inhaler therapy may be more convenient and effective than multiple inhalers; single inhalers improve adherence to treatment

Exacerbations refers to the number of exacerbations per year; eos: blood eosinophil count in cells per microliter; mMRC: modified Medical Research Council dyspnea questionnaire; CAT™: COPD Assessment Test™.

Pharmacologic

Inhalers

Significantly improve lung function, dyspnoea, health status, and reduce exacerbations.



Bronchodilators: LABA/LAMA Inhalers

Inhalers

LABAs and LAMAs significantly improve lung function, dyspnoea, health status, and reduce exacerbations.



Slightly trickier
Less insp effort
2 puffs once daily

Easy to use
1 puff once daily

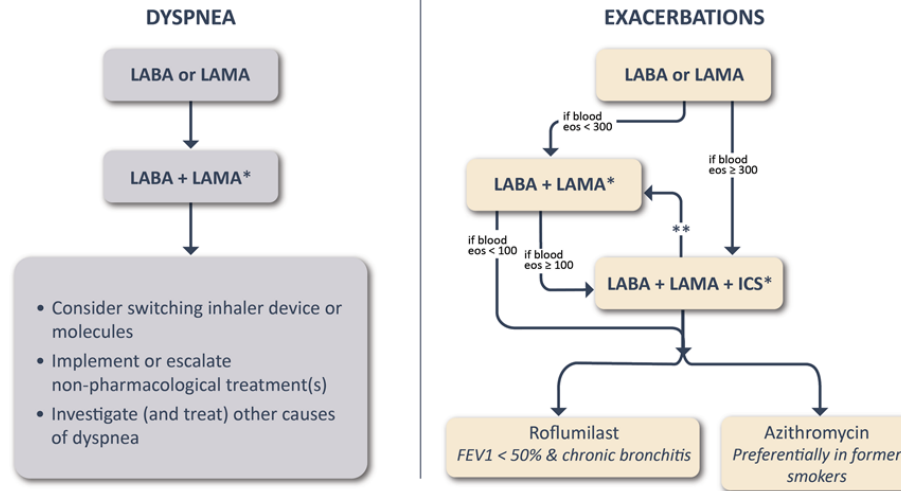


Requires capsule
1 puffs once daily

Easy to use
1 puff twice daily



- 1 IF RESPONSE TO INITIAL TREATMENT IS APPROPRIATE, MAINTAIN IT.
- 2 IF NOT:
 - Check adherence, inhaler technique and possible interfering comorbidities
 - Consider the predominant treatable trait to target (dyspnea or exacerbations)
 - Use exacerbation pathway if both exacerbations and dyspnea need to be targeted
 - Place patient in box corresponding to current treatment & follow indications
 - Assess response, adjust and review
 - These recommendations do not depend on the ABE assessment at diagnosis



*Single inhaler therapy may be more convenient and effective than multiple inhalers; single inhalers improve adherence to treatment

**Consider de-escalation of ICS if pneumonia or other considerable side-effects. In case of blood eos ≥ 300 cells/μl de-escalation is more likely to be associated with the development of exacerbations

Exacerbations refers to the number of exacerbations per year

Follow-up Pharmacological Treatment

- 1 IF RESPONSE TO INITIAL TREATMENT IS APPROPRIATE, MAINTAIN IT.
- 2 IF NOT:
 - Check adherence, inhaler technique and possible interfering comorbidities

DYSPNEA

LABA or LAMA

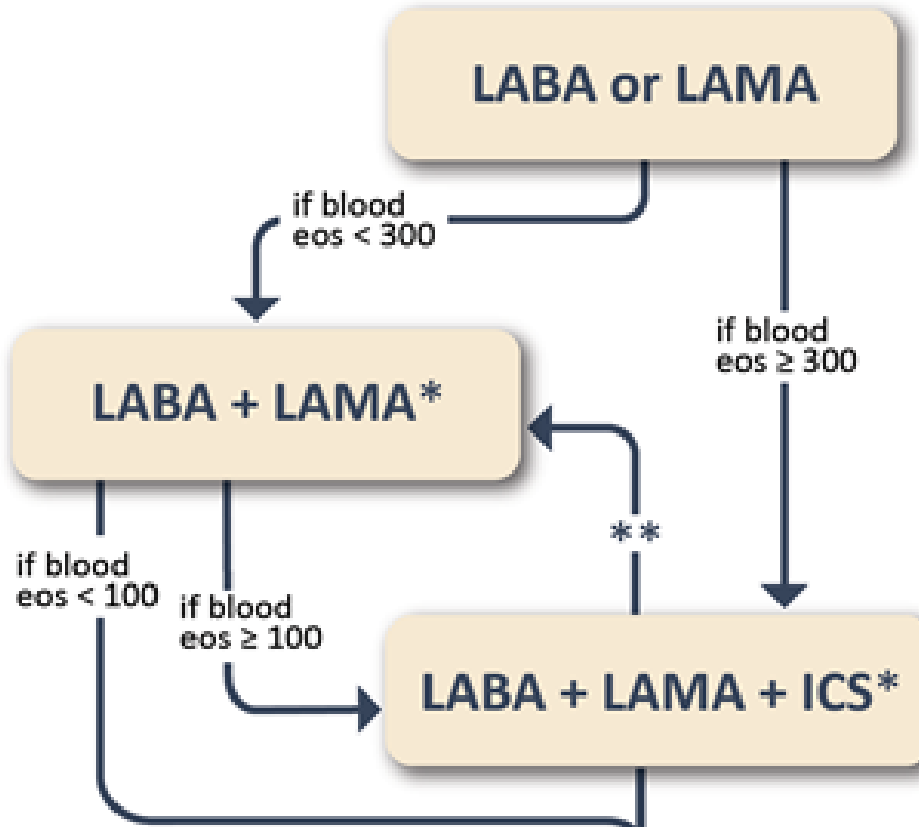


LABA + LAMA*

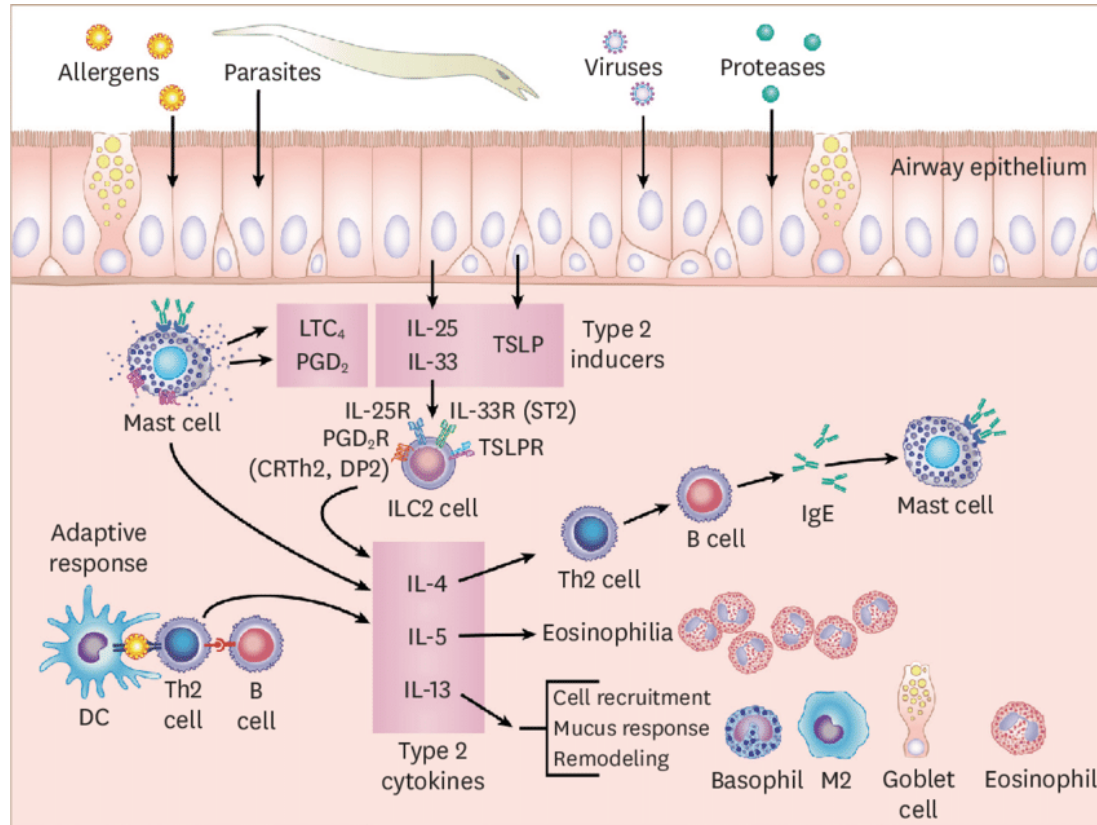


- Consider switching inhaler device or molecules
- Implement or escalate non-pharmacological treatment(s)
- Investigate (and treat) other causes of dyspnea

EXACERBATIONS



Side Note – Type 2 Inflammation



FeNO



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ORIGINAL ARTICLE



Dupilumab for COPD with Type 2 Inflammation Indicated by Eosinophil Counts

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Dupilimab in COPD patients with:

2+ moderate or 1+
severe exacerbation

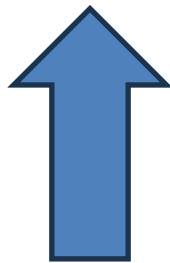
Chronic bronchitis
phenotype

Eos >300

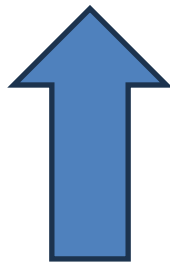
On triple Rx



Exacerbations



FEV₁

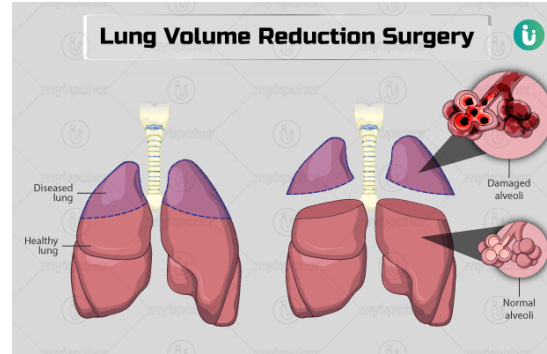


Health status

Home O2



Surgical intervention



NIV



Palliative Care



Management

Overview





Conclusion

COPD is a major respiratory issue

Treatment algorithms have changed – need to focus on preventing exacerbations

New treatments are finally coming on line – likely big changes ahead

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Thank you