



COPD – Where Are We Now?

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25 May 2011

IDENTIFICATION AND DIAGNOSIS

- Persistent cough, sputum and/or breathlessness.
- Outreach spirometry recommended if available.
- Arrange chest CXR and FBC at initial presentation.
- Distinguish from asthma (see note 1 over).

DISEASE REGISTER

- All patients with FEV1 / FVC <70% predicted can be diagnosed as COPD.
- All above patients with FEV1 <80% predicted should be on COPD register and offered annual review.

Classification

- ❖ Mild - FEV1 >80% predicted (if symptomatic).
- ❖ Moderate - FEV1 50-79% predicted.
- ❖ Severe - FEV1 30-49% predicted.
- ❖ Very severe - FEV1 <30% predicted.

All patients on register should have functional assessment (see note 2 over) as this affects therapeutic decisions.

Initial assessment and annual review when stable

- Functional ability / breathlessness scale (see note 2 over).
- Ask about occupational dust or fume exposure.
- Smoking status - offer referral to Smoking Cessation when appropriate.
- BMI - record - advise as appropriate (see below).
- Medication review (see below) including a visual check of inhaler technique.
- Consider chest x-ray and / or repeat lung function assessment if unexpected change in MRC grade (see OP referral below).
- Reinforce action to be taken if acute exacerbation including self management plan if appropriate (see note 3 over).
- Consider psychological morbidity - treat according to HADS score or PHQ9 score for anxiety / depression.
- Consider pulmonary rehabilitation if appropriate, and agreed with patient.
- Consider osteoporosis screening in patients maintained on inhaled steroid dose >800ug / day (Beclometasone equivalent for 10 years and a 10 year risk of major fracture >10% (use Who FRAX) www.sheffield.ac.uk/frax

HOSPITAL OUTPATIENT REFERRAL

Consider hospital outpatient referral if:

- * Age < 40.
- * Never smoked / occasional smoker.
- * Diagnostic uncertainty e.g. symptoms disproportionate to lung function at initial assessment or follow up.
- * Severe symptoms or signs of cor pulmonale (e.g. ankle swelling) MRC grade 4 / 5, FEV1 <30% or SaO₂ <92%.
- * Unintentional weight loss - for CXR (? lung Ca). Consider investigation to exclude other causes.
- * If considering nebulised treatments or oxygen.
- * Frequent exacerbations to exclude bronchiectasis

TREATMENT

Pulmonary rehabilitation - offer to all patients who are functionally disabled (≥ MRC grade 3).

Non Pharmacological

- * smoking cessation advice - see GGC guidance.
- * annual flu immunisation.
- * once only pneumococcal immunisation.
- * encourage physical activity (can use exercise referral if need additional encouragement / support).
- * encourage weight management if BMI >25 and no unintentional weight loss (can use GGC Weight Management Service or Shape Up).
- * If BMI <20 or MUST questionnaire positive, refer to Dietitian.

Pharmacological: See NHS GGC Formulary

Oxygen

- * Initiation requires outpatient assessment - see Oxygen Guidelines and referral for cor pulmonale above.



Order of introducing inhaler therapy for persisting symptoms (breathlessness or exacerbations) in COPD

	FEV1 > 50%	FEV1 ≤ 50%
1	SABA	SABA
2	LAMA or LABA	LAMA or LCCI
3	LCCI or LABA + LAMA	LAMA + LCCI
4	LCCI + LAMA	

SABA = short acting beta2 agonist

LCCI = LABA and corticosteroid combination inhaler

LABA = long acting beta2 agonist

LAMA = long acting muscarinic antagonist

Ensure adequate inhaler technique

Metered dose inhalers (+/- spacer device) should be considered first for beta 2 agonist therapy

See NMSGC Formulary for individual choices.

Patients should not be started on nebulised treatments unless agreed with consultant.

Mucolytics

Mucolytic drug therapy should be considered in patients with a chronic cough productive of sputum. Carbocisteine 375mg tablets should only be continued if there is symptomatic improvement. Do not routinely use mucolytic drugs to prevent exacerbations in people with stable COPD.

NOTE 1: DIAGNOSIS - COPD OR ASTHMA?

Consider asthma as a possible diagnosis particularly if:

- > Patterns of symptoms suggest asthma e.g. wheeze, nocturnal waking, atopy diurnal variation.
- > Non-smoker
- > >400ml improvement of FEV1 or significant (20%) variability in PEFr

NOTE 2: FUNCTIONAL ABILITY / BREATHLESSNESS SCALE

It remains clinically helpful to assess breathlessness, using MRC grading of 1 to 5. This is a validated measure of disease severity irrespective of patient's FEV1. Grade 3 and above - offer referral to pulmonary rehab.

Grade 1: Not troubled by breathlessness except on strenuous exercise.

Grade 2: Short of breath when hurrying, or walking up a slight hill.

Grade 3: Walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace.

Grade 4: Stops for breath after walking about 100 metres or after a few minutes on level ground.

Grade 5: Too breathless to leave the house or breathless when dressing or undressing.

NOTE 3: TREATMENT OF EXACERBATION OF COPD

Defined as an acute onset of increase in breathlessness, cough or sputum production, or change in sputum colour, sustained for at least a day.

1. Step up current short acting B2 agonist.
2. Initiate Prednisolone 30mg/day for 7 – 14 days.
3. Antibiotic only if purulent sputum – Amoxicillin 500mg tds or Clarithromycin 500mg bd for 5 days.
4. If you offer self-initiation of antibiotics and/or steroids, ensure a written plan reflecting the above.

NOTE 4: TRIALS OF DRUGS FOR SYMPTOMATIC RELIEF

These drugs help some, but not all patients with COPD. An initial trial of one month is suggested with symptomatic assessment of response. The following questions can be useful:

- > Has your treatment made a difference to you?
- > Has your treatment made any difference to your breathing?
- > Has your treatment made any difference to your sleep?
- > Has your treatment made any difference to what you can do and how fast you can do it?
- > Has your treatment made any difference to how breathless you are when you are doing things?
(For the last two questions, it is worth identifying specific examples)
If the patient reports clear benefit, continue treatment.
If no clear benefit, withdraw treatments to test effects of withdrawal.

NOTE 5: PALLIATIVE CARE

The Gold Standards Framework-Prognostic Indicator Guidance (GSF-PIG) can be used to identify those patients that may benefit from a holistic supportive/palliative care assessment. Such patients should be considered for the general practice palliative care register.

Opiates should be used when appropriate for the palliation of breathlessness in patients with end-stage COPD unresponsive to other medical therapy. Use benzodiazepines, tricyclic antidepressants, major tranquilisers and oxygen when appropriate.

Patients may also benefit from various non-pharmacological approaches as well as the involvement of multidisciplinary palliative care teams.



Changes in COPD Guidelines

- Review of guideline originally developed in 2005 and reviewed in 2008
- Guideline based originally on GOLD + BTS + NICE guidelines. Laterally most influenced by NICE 2010 COPD Guideline
- Multidisciplinary group of GPs + Respiratory Consultants + Nurses (both primary and secondary care) and pharmacy

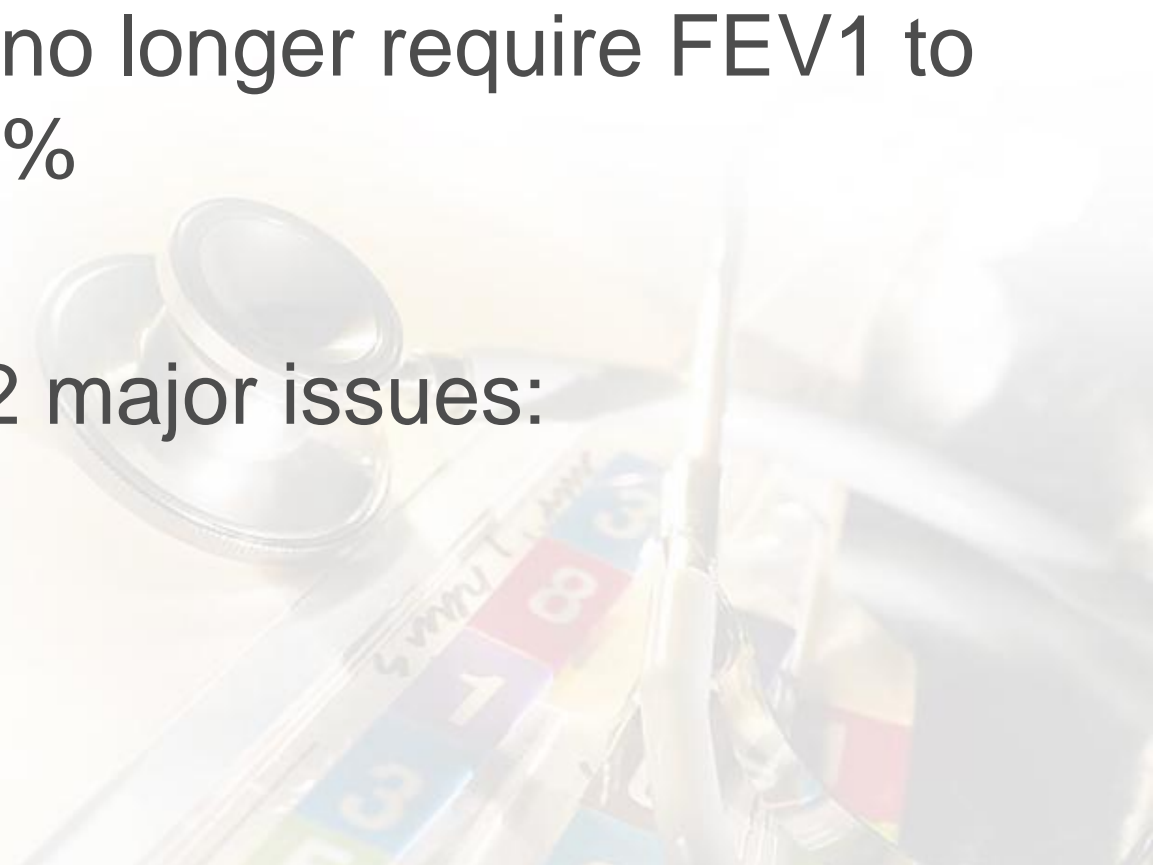


Main Changes in COPD Guideline





Change in Spirometric Diagnosis

- COPD can be diagnosed as FEV1 / FVC ratio $<70\%$. We no longer require FEV1 to also be under 80%
 - This will lead to 2 major issues:
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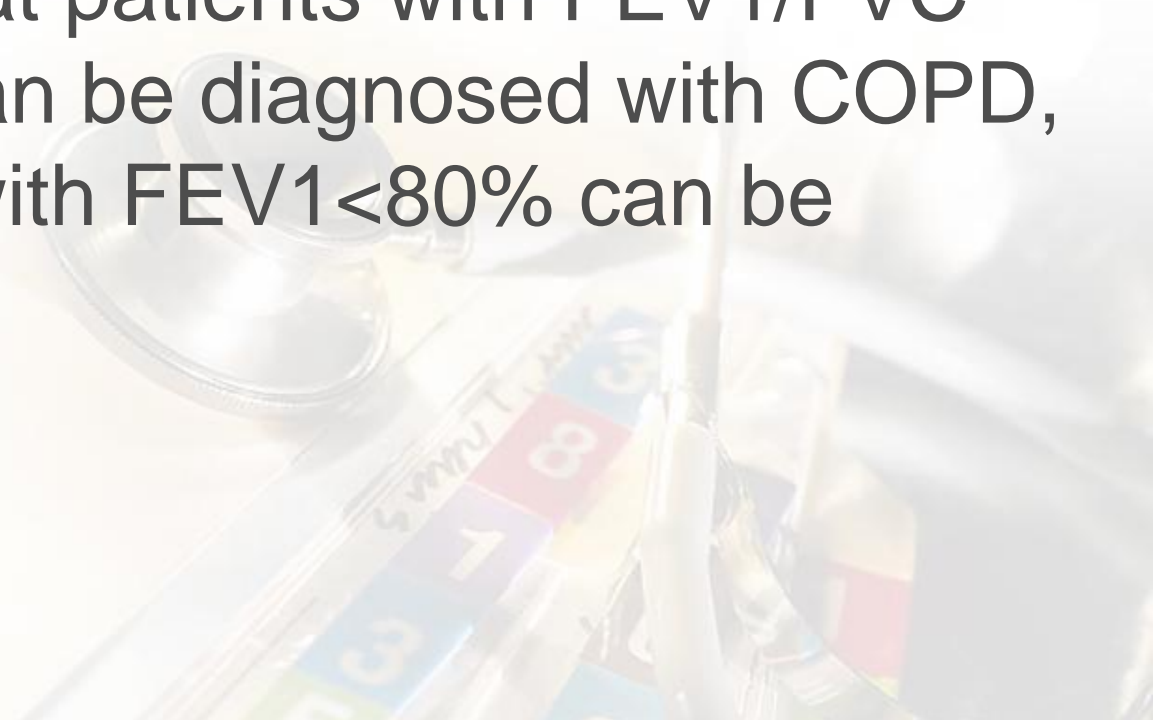


Change in Spirometric Diagnosis

1. There will be an increase in the elderly populations who are diagnosed with COPD. These people have less elastic lungs and may have an FEV1 / FVC ratio of 70% but may not be symptomatic and may not have any demonstrable lung disease on CT or at post mortem



Change in Spirometric Diagnosis

2. Coding for these patients differs from QOF coding. We have made the compromise in the guideline that patients with FEV1/FVC ratio of $<70\%$ can be diagnosed with COPD, but only those with FEV1 $<80\%$ can be coded
- 



Treatment with Inhaler Therapy

- NICE have suggested:

FEV1 > 50%	FEV1 < 50%
SABA	SABA
LAMA or LABA	LAMA or LCCI
LCCI or LABA + LAMA	LAMA + LCCI
LCCI + LAMA	

Key: SABA = Short acting β^2 agonist

- *LABA = Long acting β^2 agonist*
- *LAMA = Long acting muscarinic antagonist*
- *LCCI = LABA and corticosteroid combination inhaler*



Osteoporosis Guideline

- Advise on WHO FRAX tool





Calculation Tool

Please answer the questions below to calculate the ten year probability of fracture with BMD.

Country: UK	Name/ID: <input type="text"/>	About the risk factors
Questionnaire:		
1. Age (between 40-90 years) or Date of birth	10. Secondary osteoporosis <input checked="" type="radio"/> No <input type="radio"/> Yes	
Age: <input type="text"/> Y: <input type="text"/> M: <input type="text"/> D: <input type="text"/>	11. Alcohol 3 or more units per day <input checked="" type="radio"/> No <input type="radio"/> Yes	
2. Sex <input type="radio"/> Male <input type="radio"/> Female	12. Femoral neck BMD (g/cm ²)	
3. Weight (kg) <input type="text"/>	Select DXA <input type="text"/>	<input type="button" value="Clear"/> <input type="button" value="Calculate"/>
4. Height (cm) <input type="text"/>		
5. Previous fracture <input checked="" type="radio"/> No <input type="radio"/> Yes		
6. Parent fractured hip <input checked="" type="radio"/> No <input type="radio"/> Yes		
7. Current smoking <input checked="" type="radio"/> No <input type="radio"/> Yes		
8. Glucocorticoids <input checked="" type="radio"/> No <input type="radio"/> Yes		
9. Rheumatoid arthritis <input checked="" type="radio"/> No <input type="radio"/> Yes		

Risk factors

For the clinical risk factors a yes or no response is asked for. If the field is left blank, then a "no" response is assumed. See also notes on risk factors.

The risk factors used are the following:

Age	The model accepts ages between 40 and 90 years. If ages below or above are entered, the programme will compute probabilities at 40 and 90 year, respectively.
Sex	Male or female. Enter as appropriate.
Weight	This should be entered in kg.
Height	This should be entered in cm.



WHO FRAX tool

Age \geq 50 years	
Inhaled steroid dose \geq 800ug/day (beclometasone equivalent*) for 10 years	
AND	
10 year risk of major fracture $>$ 10% (use WHO FRAX**)	
Arrange DXA Scan (including lateral morphometry) (use DADS referral if Primary Care)	
Vertebral fracture absent	Vertebral fracture present
Bone protective treatment not required Consider re-scan in 5 years	
Start bone protective treatment Review treatment and consider re-scan in 5 years	

T-score
Lower of Hip
or Spine

-1.0

-1.6

-2.0



WHO FRAX tool

*Beclometasone equivalent dose:

Remember fluticasone is approximately twice as potent:
Fluticasone comes in 125, 250 and 500ug inhalers. Consider referral for patients on fluticasone at 500ug daily for 5 years (or 1000ug/day for 5 years) and increased FRAX risk

**WHO FRAX

Fracture risk calculator available at www.sheffield.ac.uk/FRAX

Do **not** use associated NOGG treatment guidance. Treatment recommendation will be made within DADS report



Changes in MRC Grading Questions

Made simpler. For example:

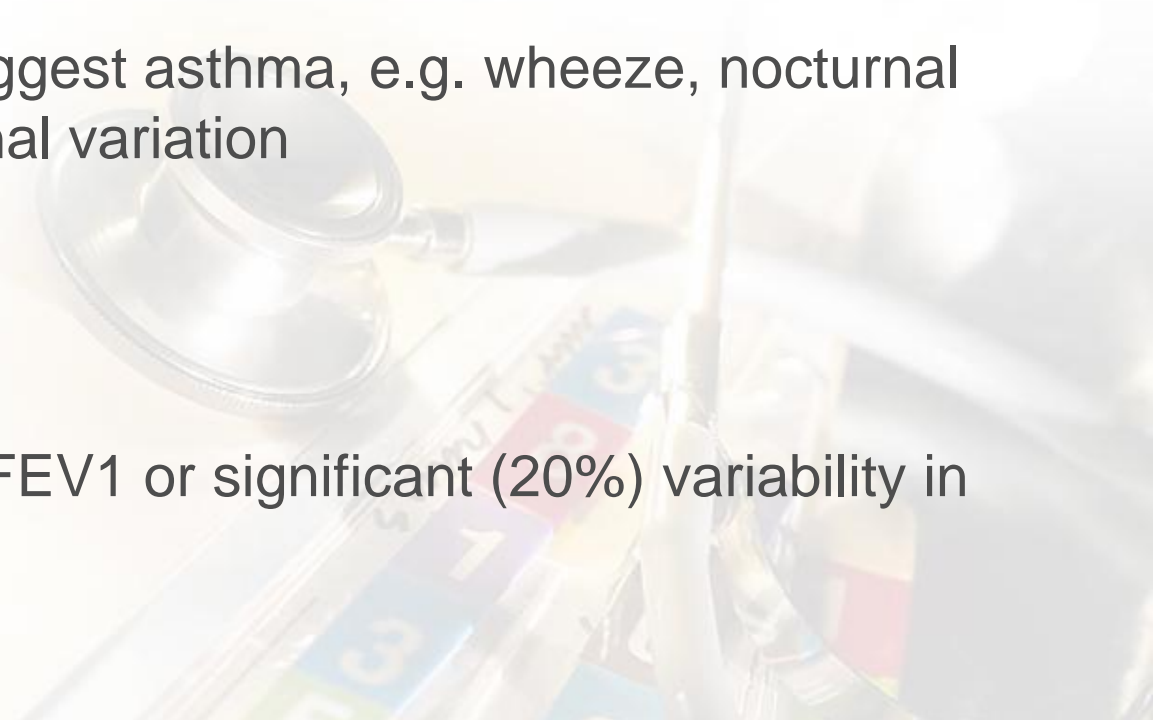
- MRC grade 2 changed from “copes with daily activity but some difficulty keeping up with peers – especially on hills and stairs”
- to
- *“short of breath when hurrying or walking upstairs”*
- MRC grade 4 changed from “marked limitation in outdoor activity – stairs and inclines with great difficulty. Self caring indoors”
- to
- *“stops for breath after walking about 100 metres or after a few minutes on level ground”*



Simplification of Clinical Suspicion


- *Simplification of clinical suspicion of asthma being a diagnosis rather than COPD*

This now reads:

- Pattern of symptoms suggest asthma, e.g. wheeze, nocturnal wakening, atopy or diurnal variation
 - Non-smoker
 - 400 ml improvement of FEV1 or significant (20%) variability in PEFr
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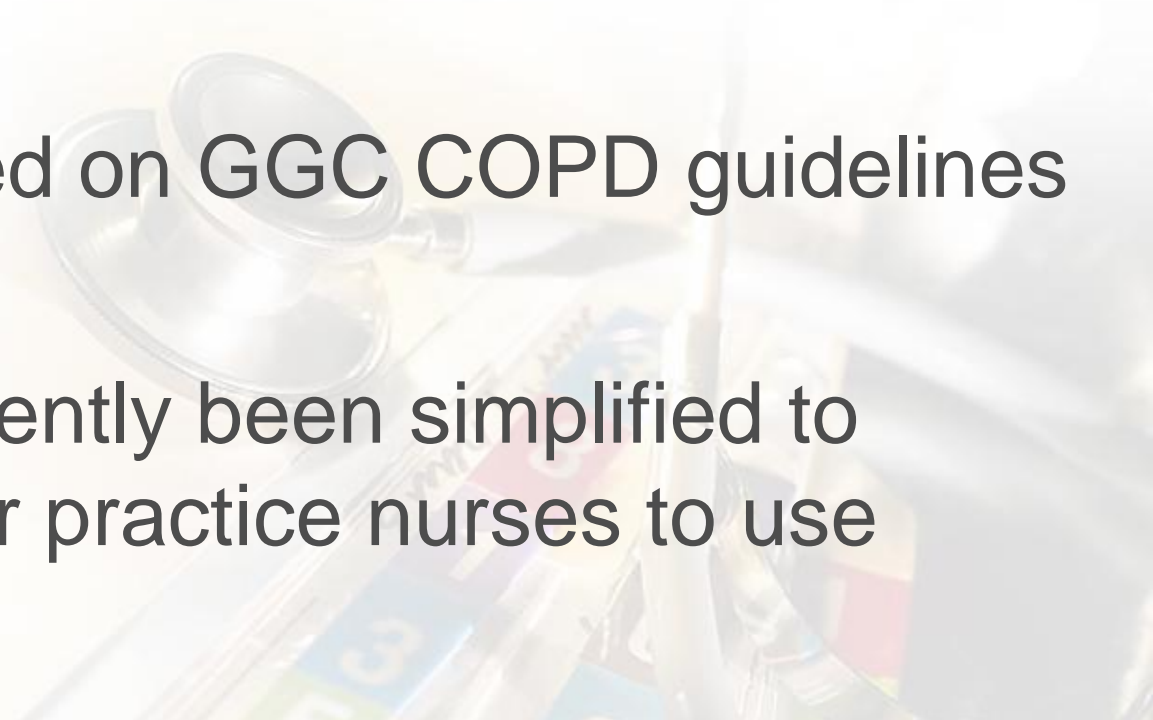


Palliative Care Advice

- Rather than dosages of drugs, advice on which drugs to use
 - Multidisciplinary palliative care teams should be involved
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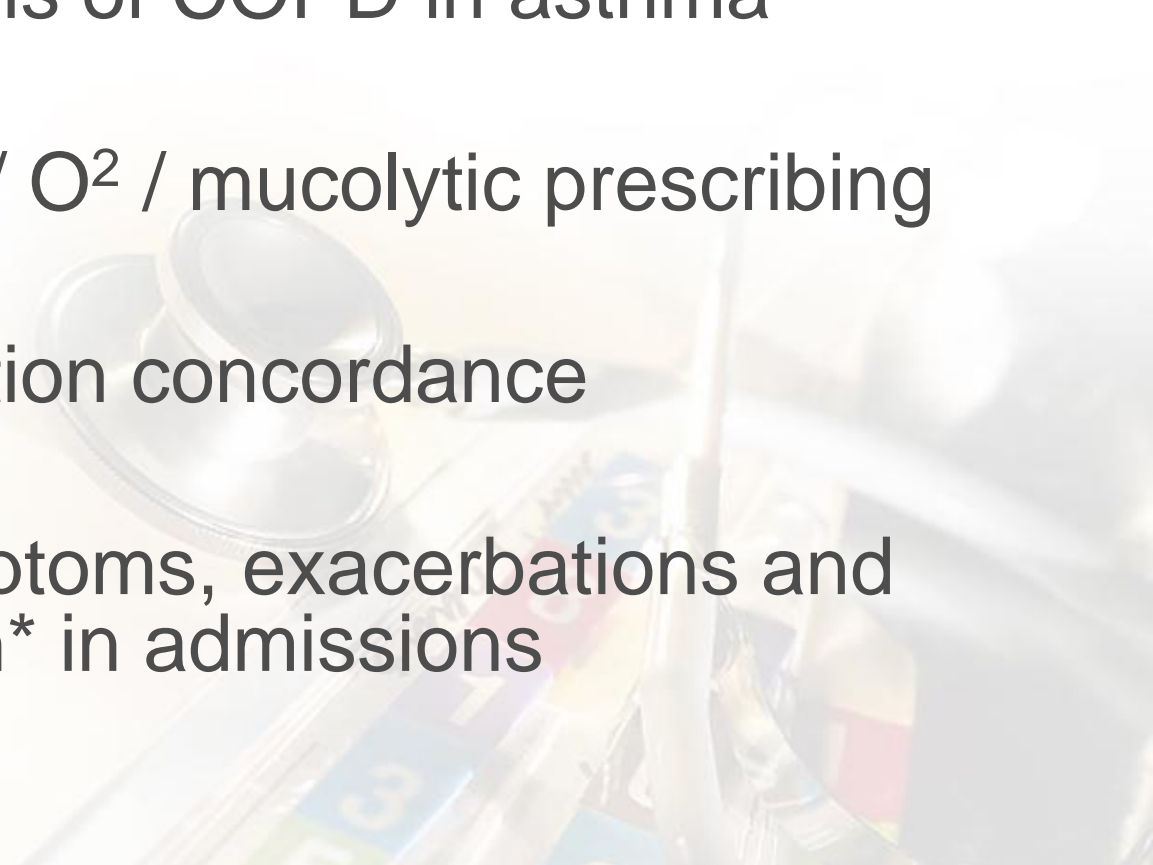
COPD LES

- New COPD LES introduced
 - Others have been stopped
 - COPD LES based on GGC COPD guidelines
 - LES screens recently been simplified to make it easier for practice nurses to use
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By introducing the COPD LES...

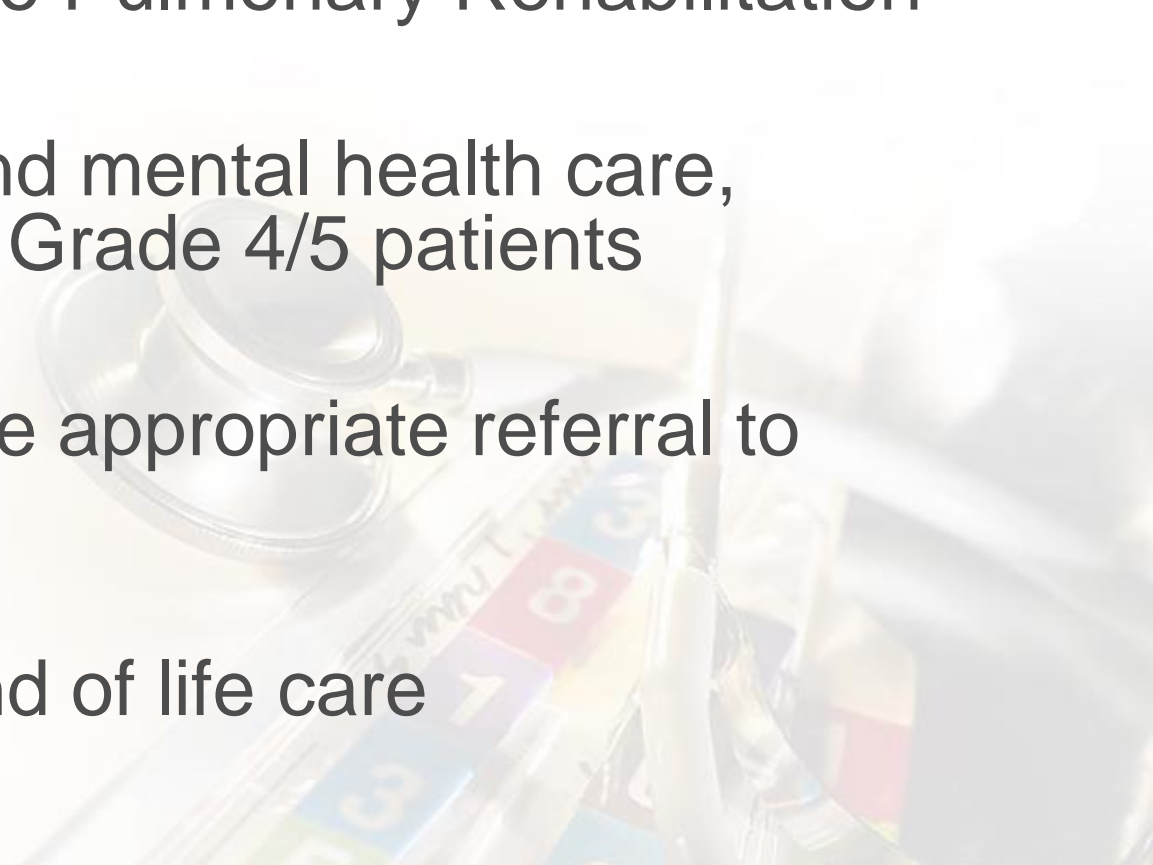
We hope to improve the following:

- Improved diagnosis of COPD in asthma
 - Improved inhaler / O² / mucolytic prescribing
 - Improved medication concordance
 - Reduction in symptoms, exacerbations and possibly reduction* in admissions
- 



By introducing the COPD LES...

We hope to improve the following:

- Improved referral to Pulmonary Rehabilitation*
 - Improved social and mental health care, especially in MRC Grade 4/5 patients
 - Improved and more appropriate referral to secondary care
 - Improvement in end of life care
- 



- Your questions



- Thank you for your time

