

Reducing the use of inhaled corticosteroids in mild-moderate COPD

This summary guidance updates chapter 3 the CEG COPD 2012 guidance

Primary Objectives

- Review the benefits and risks of inhaled corticosteroid (ICS) use in mild and moderate COPD.
- Provide practice searches for patients who may benefit from ICS withdrawal.
- Provide advice on managing ICS withdrawal, including a patient leaflet.
- Focus COPD management on high value non-pharmacological interventions such as:
 - Inhaler technique
 - Influenza and pneumococcal vaccination
 - Smoking cessation
 - Pulmonary rehabilitation

Key points

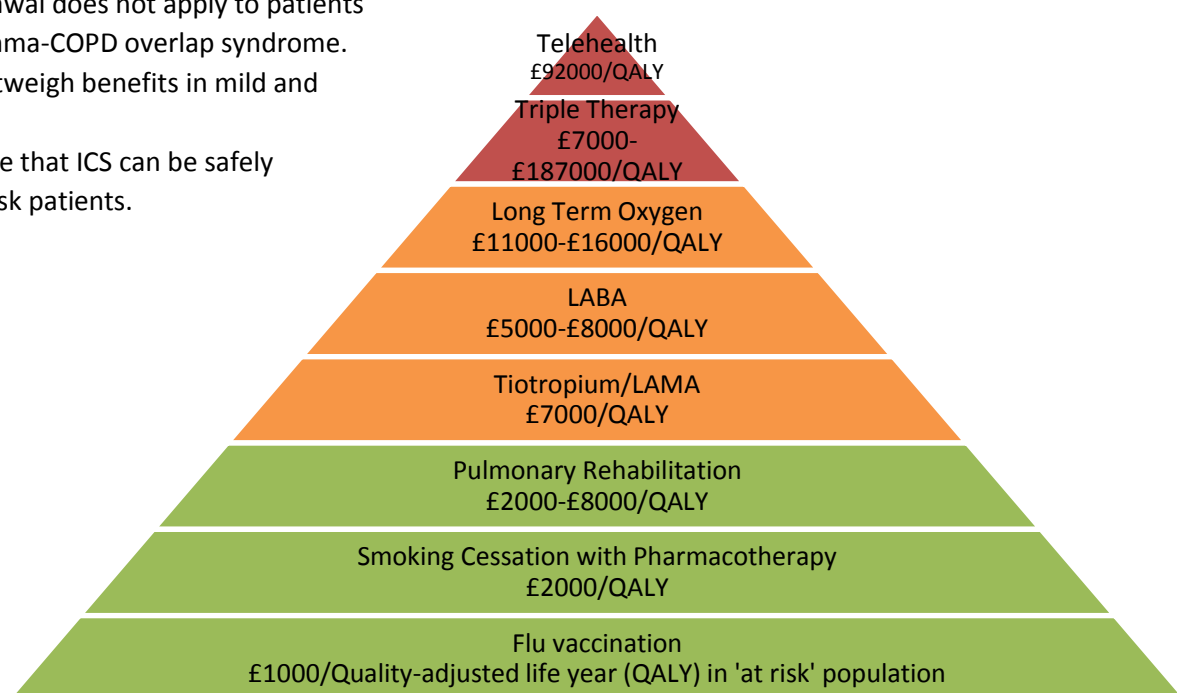
- Inhaled corticosteroids have an important role in asthma, ICS withdrawal does not apply to patients with asthma or asthma-COPD overlap syndrome.
- Risks of ICS may outweigh benefits in mild and moderate COPD.
- Studies demonstrate that ICS can be safely withdrawn in low risk patients.

Background

East London has above average rates of COPD compared to the London average. Prevalence has risen over recent years as a result of sustained efforts to improve recognition and diagnosis in primary care.

Tower Hamlets has high rates of emergency admissions for COPD, but above average costs for COPD medication¹. Combination inhalers, such as long acting beta agonists (LABA) and ICS, are among the highest cost drugs in the NHS.

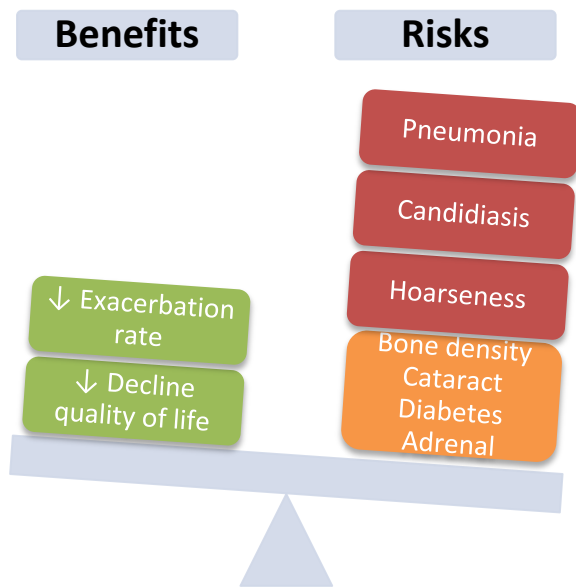
Clinical focus is often on pharmacological treatments, whereas non-pharmacological interventions with higher cost-benefit are sometimes overlooked².



COPD Value Pyramid (Adapted from London Respiratory Network)

Evidence for the use of ICS in COPD

Inhaled corticosteroids increase the time to next exacerbation and slow the decline in quality of life. Effects are greatest in those with severe disease and frequent exacerbations. Risks including pneumonia, oropharyngeal candidiasis and voice hoarseness have been clearly demonstrated. Possible risks such as bone density reduction, development or worsening of diabetes, cataract and adrenal suppression are also widely cited³.



For patients at high risk of exacerbation and mortality the benefits of ICS outweigh the harms. For those at low risk it is likely that ICS harms outweigh the benefits. The risks and benefits of ICS in COPD should be balanced to inform prescribing decisions.

CEG data for Tower Hamlets shows that 64% of low risk patients may be receiving ICS inappropriately².

Safety of ICS withdrawal

Evidence from randomised controlled trials supports ICS withdrawal from patients with stable mild-moderate COPD, few exacerbations and no asthma⁴.

GP led programmes with support from COPD specialists have shown success in reducing ICS use in other parts of London⁵.

Risk Assessment in COPD Patients

The Global Initiative for Chronic Obstructive Lung Disease (GOLD) guides pharmacological management in COPD⁶ based upon:

- Breathlessness symptoms (MRC score)
- Spirometry values (% predicted FEV1)*
- Annual COPD exacerbation or admission rates

This risk stratifies patients using four groups (A-D). Patients are 'high risk' and ICS are usually indicated if:

- Predicted FEV1 is < 50% **OR**
- Two or more COPD exacerbations in last year **OR**
- Any COPD hospital admission in last year

Patients are 'low risk' and ICS usually not indicated if:

- Predicted FEV1 is ≥ 50% **AND**
- Fewer than two COPD exacerbations in last year **AND**
- No COPD hospital admission in last year

HIGH RISK	Predicted FEV1 <50%	C	D	≥2 exacerbations OR any hospital admission	HIGH RISK
LOW RISK	Predicted FEV1 ≥50%	A	B	0-1 exacerbations AND no hospital admission	LOW RISK
		MRC score 1-2	MRC score 3-5		

* FEV1 was removed from the GOLD 2016 update. This guidance continues to use % predicted FEV1 as we have complete data for the measurement, but less complete data on annual exacerbations and hospital admissions.

Eosinophilia

There is increasing evidence that COPD patients with a high blood eosinophil count may have greater benefit from ICS, so consider continuing ICS in this group even if they are 'low risk'.

Identifying patients appropriate for ICS withdrawal

CEG has developed searches to identify 'low risk' patients for whom ICS withdrawal may be appropriate:

- Patients on COPD register
- Exclude patients on Asthma register
- Latest predicted FEV1 in last 3 years \geq 50%
- Latest coded annual exacerbation rate in last year $<$ 2
- Exclude patients with eosinophils $>$ 0.5 in last 3 years
- Received ICS in the last 6 months

This list is not prescriptive and is based on coded data which may be incomplete - in particular **it will not capture hospital admissions.**

Management decisions should be made on an individual basis in conjunction with the patient. A patient information leaflet has been developed to provide information on the reasons for withdrawing inhaled steroids and general advice on COPD management.

Components of Stepdown Withdrawal of ICS

- Discuss balance of risks and benefits of ICS with patient. Provide written information and management plan for a phased reduction of ICS using a series of inhalers reducing in steroid potency.
- Initially step down to the next lowest potency inhaler after approximately 2 months.
- Consider face-to-face or telephone reviews during the withdrawal phase.
- Maintain or increase dose of bronchodilators (LABA/LAMA).
- Ensure good inhaler technique and issue a spacer for metered dose inhalers (MDI).
- Encourage uptake of flu/pneumococcal immunisation, smoking cessation and pulmonary rehabilitation.
- Advise on the identification and early self-management of exacerbations.
- Provide rescue medication with steroids and antibiotics if appropriate.

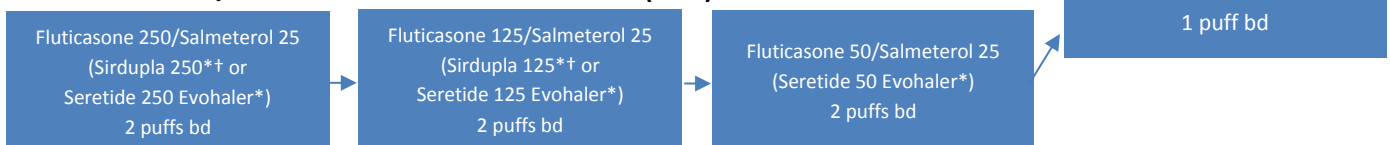
Seek advice from a Consultant Respiratory Physician at your network respiratory MDT if required.

Examples of ICS Withdrawal Regimes (Adapted from Lambeth CCG⁷)

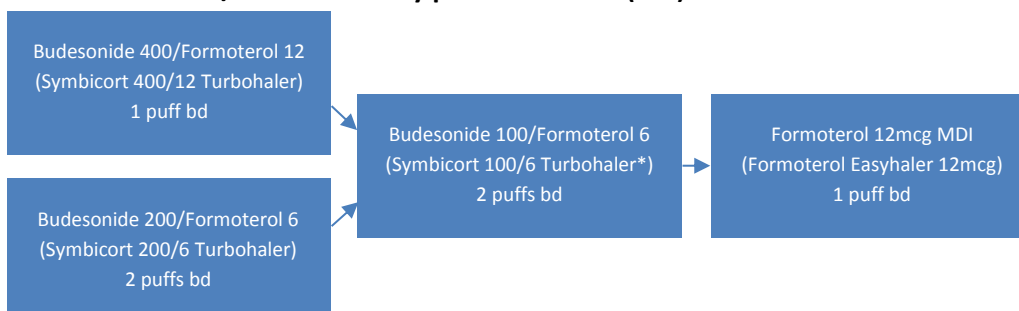
• Fluticasone / Salmeterol dry powder inhaler (DPI)



• Fluticasone / Salmeterol metered dose inhaler (MDI)



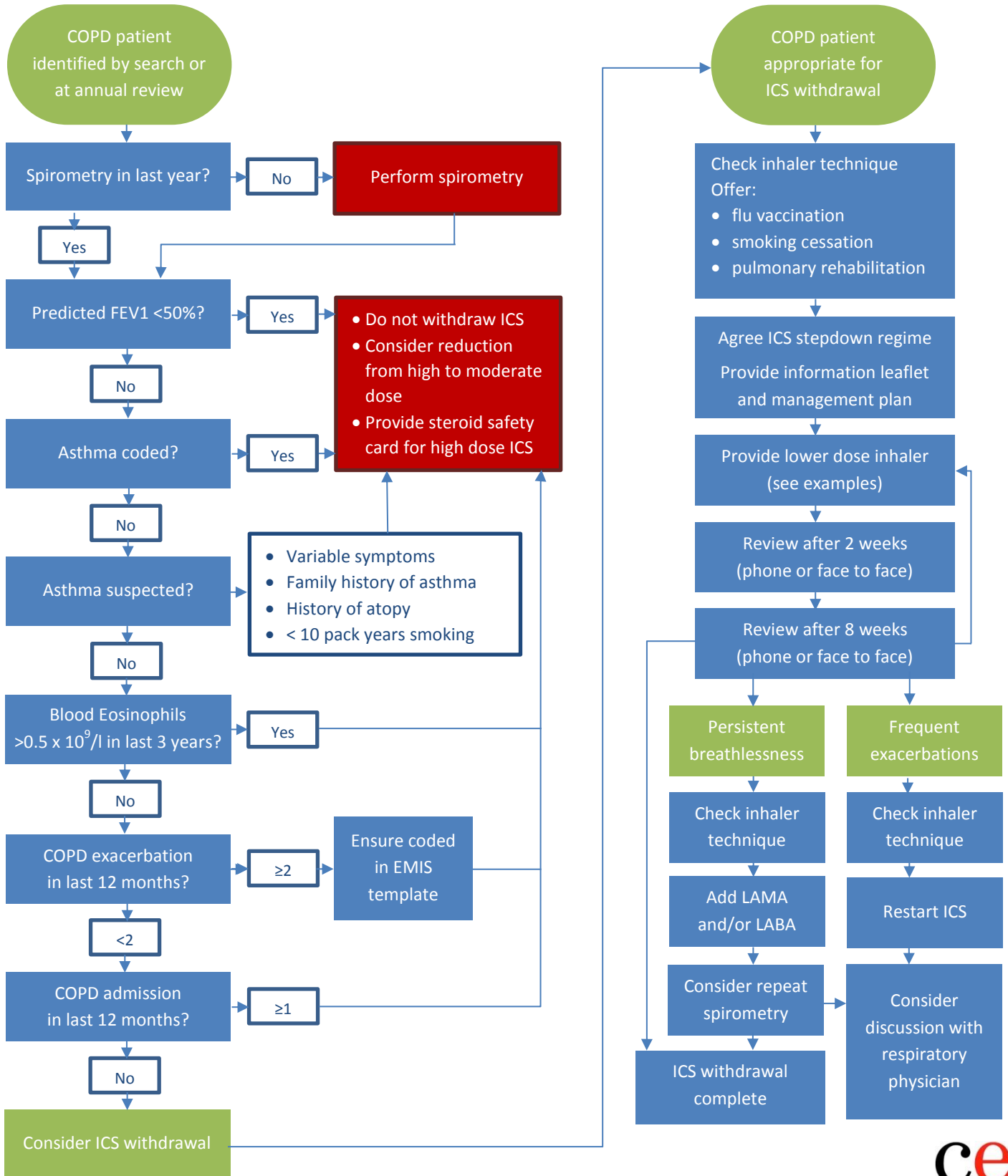
• Budesonide / Formoterol dry powder inhaler (DPI)



Notes

- This is a guide and should be individualised for each patient. Patients may be using separate ICS / LABA or other combination inhalers.
- Doses stated are in micrograms and per inhaler actuation. Brand prescribing is essential as products are not interchangeable.
- * Product unlicensed in COPD. † Sirdupla compatible with AeroChamber spacer only.
- Please check the [Tower Hamlets Formulary](#) for up to date recommendations.

Patient Identification and Management of ICS Withdrawal



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References

- 1 NHS Right Care. 2016. Available at <http://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2016/08/cfv-tower-hamlets-ltc.pdf>
- 2 Local CEG data, 2016
- 3 Yang IA et al. Inhaled corticosteroids for stable chronic obstructive pulmonary disease. Cochrane Database Syst Rev. 2012 Jul 11;(7):CD002991
- 4 Magnussen H et al. Withdrawal of inhaled glucocorticoids and exacerbations of COPD. N Engl J Med. 2014 Oct 2;371(14):1285-94
- 5 D'Ancona G et al. Impact Of Respiratory Virtual Clinics In Primary Care On Responsible Respiratory Prescribing And Inhaled Corticosteroid Withdrawal In Patients With COPD: A Feasibility Study. Thorax 2014;69:A90.
- 6 Global Strategy for the Diagnosis, Management and Prevention of COPD. Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2016. Available at <http://goldcopd.org/>
- 7 Lambeth CCG. Review of inhaled corticosteroids in patients with mild or moderate Chronic Obstructive Pulmonary Disease (COPD) in general practice. 2013-14.