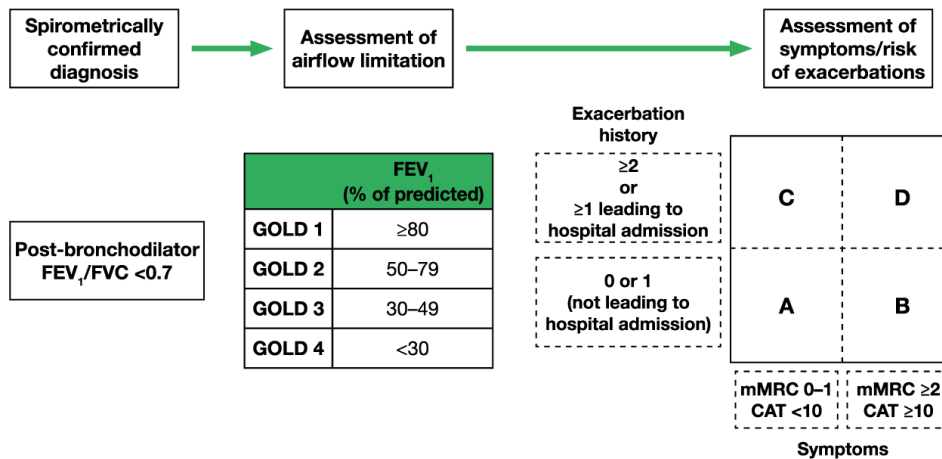


1 Reason for the review

- Respiratory prescribing is long term and can be costly. Appropriate choice and use of inhaled therapy is key to successful treatment.
- Three combination LAMA/LABA inhalers are listed on the D&G formulary. Spiolto Respimat® contains a long acting muscarinic antagonist (LAMA; tiotropium 2.5micrograms) plus a long acting beta₂ agonist (LABA;olodaterol 2.5micrograms). It is delivered as a fine liquid mist and should be taken at a dose of two puffs daily. Duaklir Genuair® contains a LAMA(acclidinium 322micrograms) plus a LABA(formoterol 12micrograms). It is a dry powder inhaler and should be taken at a dose of one puff twice daily. Anoro Ellipta® contains a LAMA (umeclidinium 65micrograms) plus a LABA (vilanterol 22micrograms). It is a dry powder inhaler and should be given once daily. They are licensed for use as a maintenance bronchodilator treatment to relieve symptoms in adult patients with chronic obstructive pulmonary disease.
- GOLD guidelines recommend a long acting bronchodilator for breathlessness (LABA or LAMA if 1 or fewer exacerbations (group A or B), a LAMA if 2 or more exacerbations (group C)) and the addition of another long acting bronchodilator if there is persistent breathlessness or if there are persistent exacerbations(LABA and LAMA). Those categorised as group D should commence on a LABA/LAMA. (see below, accessed from: *Global strategy for diagnosis, management, and prevention of COPD* goldcopd.org/gold-2017-global-strategy-diagnosis-management-prevention-copd)
- LABA/LAMA combinations have been shown to be as effective at reducing exacerbations. The use of ICS in people with COPD increases the risk of pneumonia therefore the primary recommendations for combination treatment in the GOLD guidelines are LAMA/LABA combinations rather than LABA/ICS combinations.



FEV₁=forced expiratory volume in the first second; FVC=forced vital capacity; mMRC=modified Medical Research Council; CAT=COPD assessment test.

- The audit will highlight patients taking LABA/ICS or LABA/LAMA/ICS combinations for COPD where consideration of a LABA/LAMA combination alone may be more appropriate.
- There will be a reduction in exposure to unnecessary inhaled corticosteroids in people with COPD who do not need them. This improves safety, as inhaled corticosteroid use is associated with a number of potential harmful effects, including pneumonia.
- There are potential cost savings. As an example, giving Spiolto Respimat instead of

Seretide Accuhaler plus Spiriva Handihaler or Respimat would save £503 and £377 per patient per year respectively. Giving Duaklir Genuair® instead of Fostair Nexthaler plus Eklira genuair would save £304 per patient per year.

Table 1: Potential cost savings

Inhaler	Medication	Dose	Annual cost (£)
Duaklir Genuair®	Acclidinium 322mcg plus Formoterol 12mcg	1 puff twice daily	390
Spiolto respimat®	Tiotropium 2.5mcg plus olodaterol 2.5mcg	Two puffs daily	390
Eklira Genuair®	Acclidinium 322mcg	1 puff twice daily	343
Seretide Accuhaler®	salmeterol 50mcg, fluticasone 500mcg	1 puff twice daily	491
Duoresp Spiromax®	Formoterol 4.5mcg, Budesonide 160mcg	Two puffs twice daily	360
Fostair MDI or Nexthaler	formoterol 6mcg, beclometasone 100mcg	Two puffs twice daily	351
Spiriva Handihaler®	Tiotropium 18mcg	1 puff daily	402
Spiriva Respimat®	Tiotropium 2.5mcg	2 puffs daily	276
Salmeterol 50 Accuhaler	Salmeterol 50micrograms	1 puff twice daily	351
Formoterol	12 micrograms	1 puff twice daily	142

Inclusion Criteria

All patients prescribed triple therapy for COPD will be reviewed. This will include all LABA/ICS combinations plus LAMA and LABA/LAMA plus ICS (unlicensed alone for COPD) combinations.

3 Exclusion Criteria

- Compliance issues – refer to GP/Practice nurse
- Previous switch to an alternative product which caused distress
- Any individual patient exclusions deemed necessary by the GP. (e.g. patients who are deemed to be not open to change, as judged by the GP)

4 Preparation and planning

Implementation of the audit in selected GP practices is as follows:

- Protocol to be discussed with all GP's in the practice to ensure that agreement to proceed is reached
- Computer search of all patients according to the inclusion/exclusion criteria
- Review of patients medical notes and repeat prescribing records as per date

collection sheet

- Confirmed diagnosis of COPD
- Details of last recorded FEV₁, number of antibiotic and oral steroid courses in last 12 months and inhaler technique.
- List of patients to be checked by GP/GP's or practice nurse/nurse practitioner and agreed method for change documented eg review appointment, telephone, letter.
- Changes to medication to be recorded on the computer system.

5 Action

Administration staff in practices to be made aware of any changes of repeat medication

Local pharmacies to be informed of review taking place so that they can support counselling of patients (e.g. inhaler technique reinforcement)

Report for practices will include number of switches made and projected cost savings as a result of the recommendations.

Review to be undertaken by:

GP Authorisation:

Date:

Appendix 1: Patient letter.

Patient name
Address

Dear _____

As part of a review of prescribing, NHS Dumfries and Galloway are currently reviewing all patients using inhalers in line with our local medicines formulary. These reviews take place in order to help doctors to make the most effective use of available resources and ensure that treatment is in line with current guidelines.

We are reviewing the use of inhaled corticosteroids in people with COPD and would like to invite you for a review with your practice nurse/GP. Please make an appointment in the usual way.

Should have any queries, please contact the Surgery on the number above or, alternatively, you can contact a member of the Prescribing Support Team on

Yours sincerely

Name

Prescribing Support Technician/pharmacist
On behalf of the Doctors

Data collection sheet:

Patient name and DOB	Usual GP	Last COPD review	Last FEV1*	Number of Antibiotic courses in last 12 months?	Number of Oral Steroid courses in last 12 months?	Current treatment eg acclidinium plus formoterol	Is patient prescribed an ICS**	Recommendations	GP approved Y / N

* If FEV1 \geq 50% predicted refer to practice pharmacist/nurse

** If yes – refer to practice pharmacist/nurse