Summary of Changes V2.42, May 2015

C. Confirm diagnosis and assess severity

C2.3 Spirometry

New sentences have been added presenting the evidence that the fixed ratio can lead to over diagnosis of COPD in older populations, under diagnosis in younger people (Cerveri et al., 2008, Vollmer et al., 2009, Swanney et al., 2008) and may lead to gender imbalances as women have higher FEV1/FVC than their male counterparts (Guerra, 2009). A systematic review of 11 studies which examined the relationship of each criterion with clinical outcomes found both were related to clinical outcomes and concluded that on current evidence one could not be preferred over the other. The LLN appeared to be a better criterion in older patients with less severe airflow limitation (van Dijk et al., 2014)

O- Optimise Function

O1.1.2 Short-acting muscarinic antagonist (SAMA)

New paragraph added to explain the transition in terminology away from anti-cholinergic and toward anti-muscarinic.

O1.2.1 Long-acting muscarinic antagonists (LAMA)

Addition of a new sentence reporting effect on FEV_1 of 18 micrograms per day of tiotropium in mild-moderate COPD over 7 months. (Troosters et al., 2014)

O1.2.2 Long-acting beta$_2$-agonists (LABA)

Addition of a study looking at an indirect comparison between once-daily long-acting beta$_2$-agonists, olodaterol and indacaterol. (Roskell et al., 2014)

03.3 Inhaled corticosteroids (ICS)

Addition of a systematic review of RCTs of ICS vs non-ICS therapy for COPD which showed an increased risk of TB associated with ICS use and no excess risk of influenza with ICS use. (Dong et al., 2014)

O4.1 Inhaled corticosteroids and long-acting beta2-agonists in combination (ICS/LABA)

Addition of a network meta-analysis of 21 clinical trials of ICS/LABA demonstrated that these combinations, except budesonide/formoterol and beclomethasone/formoterol, reduced moderate-to severe exacerbations as compared with placebo and LABA; however, none of the combinations reduced severe exacerbations. (Oba and Lone, 2014)

Addition of a study that showed fluticasone furoate to vilanterol increased the risk of pneumonia, particularly in patients with more severe airflow limitation (FEV_1/FVC <0.46) and either BMI <19 (HR 7.8, 95% CI 4.7–13.0) or previous history of pneumonia (HR 4.8, 95% CI 3.0–7.7) (DiSantostefano et al., 2014)

O5. Inhaler technique and adherence

O5.1 Inhaler technique

Addition of a sentence stating that pragmatic pharmacist care programmes may improve inhaler technique and refill adherence in patients with COPD. (Tommelein et al., 2014)

O6. Non-pharmacological interventions

O6.1 Physical activity

Addition of a study showing that low levels of physical activity are associated with increased mortality and exacerbations (Gimeno-Santos et al., 2014)

O9. Surgery

O9.2 Lung Volume Reduction Surgery and other techniques

Addition of a small non blinded randomised controlled trial comparing lung volume reduction coils to standard care which showed significant improvement in quality of life, lung function and six minute walk distance at 90 days. The results of larger longer duration clinical trials are required before this treatment can be considered for use in routine clinical practice. (Shah et al., 2013) Prospective randomised controlled trials are needed before any recommendations can be made. Patients with homogeneous emphysema or collateral ventilation may be better suited to coils than valves.

P: Prevent Deterioration

P1.2.2 Antidepressants

Addition of a Cochrane meta-analysis of six trials, showing the tricyclic antidepressant nortriptyline doubles cessation rates compared with placebo treatment at six months when used as sole pharmacotherapy (Hughes et al., 2014).

P2.3 Haemophilus influenzae immunisation

A Cochrane review/meta-analysis of six placebo-controlled RCTs, conducted to test the efficacy of enteric-coated, killed preparations of H. influenzae in populations prone to recurrent acute exacerbations of chronic bronchitis or COPD, concluded that there was a small, non-significant decrease in exacerbations in the vaccinated group when compared to the placebo group. (Teo et al., 2014).

P4 Antibiotics

An additional study that looked at long-term antibiotic therapy (azithromycin 500 mg, three times per week, over 12 months) effect on exacerbations was added to this section. (Uzun et al. 2014)

P7. Mucolytic agents

A new paragraph was added examining the difference of effect between high and low dose oral N-Acetylcysteine on COPD exacerbations based on a systematic

review and a meta-analysis. (Shen et al., 2014). The results of the analysis support the use of high dose oral N-Acetylcysteine (>600mg daily) in reducing acute exacerbations but not low dose. In the meta analysis neither high or low dose N-Acetylcysteine had any effect on FEV_1. The largest of the randomised controlled trials (Zheng et al., 2014) recruited patients with moderate to severe COPD with at least two exacerbations in the previous two years.

D: Develop support network and self-management

D3: Self-management

An addition of a systematic review which evaluated a suite of complex interventions including self-management and their effect on reduction of urgent health care utilisation. Complex interventions were associated with a 32% reduction in urgent health care utilisation. However in a meta regression the authors could not identify the components that contributed to the additional effect. (Dickens et al., 2014)

D4: Telehealth

The first addition of a positive study on telehealth for severe, LTOT dependent COPD patients. (Segrelles Calvo et al., 2014)

D5: Treat anxiety and depression

No change to wording, but added a new study supporting existing wording. (Blakemore et al., 2014)

X: Manage eXacerbations

X2.2 Optimise treatment

Change to Controlled Oxygen treatment section's oxygen saturation range. (Previously over 90%, changed to 88-92% to be consistent with rest of the document).

X2.2.2 Systemic corticosteroids for treatment of exacerbations

Addition of a new paragraph highlighting emerging evidence that blood eosinophil levels can be used as a biomarker to determine which patients require oral corticosteroids for exacerbations of COPD. (Bafadhel et al., 2012)

X3.6 Pulmonary rehabilitation

Addition of a sentence highlighting that pulmonary rehabilitation program initiated following hospitalisation for AECOPD is clinically effective, safe and is associated with a reduction in subsequent hospital admissions (Spruit et al., 2013).

Summary of Changes to COPD-X Concise Guide for Primary Care

Optimise pharmacotherapy using a stepwise approach

The fifth bullet point has been updated to include umeclidinium and fluticasone furoate/vilanterol. This included the addition of a new reference (Donohue 2013) and the update of the Nannini reference.

The sentence about LAMA/LABA fixed dose combinations has been added to the recommendations box.

The Stepwise Management of Stable COPD Figures have been updated.

Mucolytics may benefit certain patients with COPD.

This section has had 4 bullet points removed and the addition of a recommendation box.

Exacerbations with clinical features of infection (increased volume and change in colour of sputum and/or fever) benefit from antibiotic therapy.

The recommendation has been changed to bring it into alignment with the Therapeutic Guidelines.

All reference numbering has been updated due to the addition of a new reference.