**LTHT Drug and Therapeutics Committee Summary**

**Glycopyrronium for the management of COPD**

**Supported in line with COPD guidelines**

### Application summary - January 2013

- **Inhaled glycopyrronium** is a long-acting muscarinic antagonist (LAMA) with 24 hour action. It has a faster onset of action than tiotropium—the current formulary LAMA. Glycopyrronium has a high affinity for M3 receptors and a low affinity for M2 receptors. It also has a fast dissociation from M2 compared to M3 receptors, which may consequently contribute to a favourable cardiovascular safety profile.
- The indication applied for is maintenance bronchodilator treatment to relieve symptoms in adult patients with chronic obstructive pulmonary disease (COPD).
- This is licensed use.
- Inhaled glycopyrronium will be added to the formulary joint first line with tiotropium.
- Inhaled glycopyrronium is recommended for use in patients with COPD who experience significant symptoms such as persistent shortness of breath and reduced exercise tolerance, despite treatment with either short-acting bronchodilators (beta₂-agonist [e.g. salbutamol as required] or muscarinic antagonist [e.g. ipratropium as required or four times daily]) with or without long-acting beta₂-agonist [e.g. indacaterol, salmeterol or formoterol], or with a combination inhaler containing an inhaled corticosteroid and long-acting beta₂-agonist.
- RCT data over 26 and 52 weeks demonstrates a significant improvement in lung function, exercise tolerance, dyspnoea, health status, and a significant reduction in exacerbations of COPD compared to placebo. RCT data over 52 weeks also demonstrates non-inferiority to tiotropium in lung function, dyspnoea, health status, and exacerbation rate, although it has a faster speed of onset.
- RCT data over 26 and 52 weeks demonstrates that glycopyrronium had a similar incidence of adverse events to placebo and to tiotropium. Antimuscarinic side effects occurred at low frequencies (<3%) in all groups of patients. RCT data over 26 weeks and 52 weeks did not show any concerns of cardiovascular side effects, although patients with pre-existing cardiovascular disease were excluded from the studies (NB. Other studies of LAMAs, including tiotropium) also excluded patients with pre-existing cardiovascular disease.
- Inhaled glycopyrronium has a faster onset of action than tiotropium and is available in a dry powder inhaler device with a lower airflow resistance than tiotropium HandiHaler, which may be easier to inhale through for many patients with severe COPD (although the smaller device may require greater dexterity). Non-inferiority data compared to tiotropium and a lower cost may allow cost-savings to be made.
- If glycopyrronium is used first-line for new patients in LTHT, approximately 70-140 patients may commence therapy per year. As clinical experience increases with glycopyrronium, commissioners may wish to consider switching targeted patients to glycopyrronium from tiotropium as part of a structured COPD medicines management review.
- Data from an unpublished health economic abstract demonstrates that glycopyrronium bromide dominates tiotropium in the base case and is likely to remain cost-effective if it is assumed that glycopyrronium bromide reduces the risk of exacerbations.

### Place in therapy

- First line along with tiotropium for the management of COPD, in line with guidelines

### Drug and Therapeutics Decision Summary - January 2013

- Approved in line with application

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Compiled from the original formulary application and the Drug and Therapeutics Committee minutes

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