GSK EXECUTIVE SUMMARY

Background

- Pulmonary arterial hypertension (PAH) is an ultra orphan disease with an estimated number of new cases per year in the United Kingdom (UK) of between 102 and 145, and an estimated prevalent population of 1,565.
- PAH is a highly debilitating disease with the majority of patients dying within three years of diagnosis. The majority of presenting patients are already at an advanced stage of disease (New York Heart Association (NYHA) functional Class III and IV) due to significant delays in diagnosis.
- PAH is associated with a high economic burden. In 2005-6, idiopathic PAH (iPAH, formerly called Primary Pulmonary Hypertension (PPH) was responsible for 3,889 hospital admissions and 4,386 finished consultant episodes, accounting for 17,096 bed days.
- The aims of treating PAH range from improving functional ability to prolonging survival. Epoprostenol (Flolan®)[1] is indicated for the treatment of NYHA functional Class III and Class IV patients and is the only treatment option for NYHA functional Class IV patients other than conventional/background therapy (i.e. digoxin, anticoagulants, diuretics and oxygen) and lung/ heart-lung transplantation.

Clinical effectiveness

- A systematic review identified three randomised controlled trials (RCTs) comparing epoprostenol with conventional/background therapy alone. No head-to-head trials were identified that compared epoprostenol with other therapies in line with their licences.
- There was significant improvement in exercise capacity and mean pulmonary-arterial pressure (PAP), cardiac index (CI) and pulmonary vascular resistance (PVR) in PAH patients treated with epoprostenol compared with patients treated with conventional/background therapy alone.
- Epoprostenol significantly improved survival compared with conventional/ background therapy alone in patients with NYHA functional Class III and IV iPAH.
- Quality of life and functional class significantly improved in patients treated with epoprostenol compared with conventional/ background therapy alone.

Safety

- Adverse events were common but generally not serious; the most frequent being jaw pain and diarrhoea. However, adverse events were not consistently reported across the included trials.

Cost effectiveness

- This submission is based on an assessment of the efficacy and clinical effectiveness of epoprostenol as no formal cost effectiveness analysis is available for epoprostenol.

Conclusions

- Early use of epoprostenol, in NYHA functional Class III patients, delays disease progression, reduces mortality, and avoids the use of more invasive therapies such as lung/ heart-lung transplantation compared with conventional/background therapy. Epoprostenol should therefore be recommended as an option for patients in NYHA functional Class III.
- Epoprostenol is the only licensed therapy available for patients in NYHA functional Class IV. Compared with conventional/ background therapy, epoprostenol significantly improves functional class and survival (in iPAH), and therefore should be recommended for Class IV patients.

[1] Flolan is the trademark of GlaxoSmithKline