**INTRODUCTION**

Dulaglutide 1.5mg once weekly is a novel glucagon-like peptide 1 receptor (GLP-1) agonist, for the treatment of type 2 diabetes mellitus (T2DM).

The AWARD (Assessment of Weekly Administration of dulaglutide in Diabetes) clinical trial program assessed the relative effectiveness of dulaglutide against key comparators for the treatment of T2DM (including: exenatide BD, insulin glargine, metformin, sitagliptin and liraglutide 1.8mg).

The AWARD studies found that dulaglutide 1.5mg provided improved glycemic control relative to comparators and has shown non-inferiority to Victoza 1.8mg [1-5].

**OBJECTIVES**

The objective of this analysis was to estimate the cost-effectiveness of dulaglutide 1.5mg for the treatment of T2DM in Sweden relative to liraglutide 1.8mg (once daily, OD) and liraglutide 1.2mg (once daily, QD).

**METHODS**

This study used the IMS CORE Diabetes Model (CDM), a validated and established diabetes model to determine the cost-effectiveness of interventions in T2DM [7,8].

Treatment efficacy was based on direct comparative data from the AWARD 6 clinical trial (liraglutide 1.8mg) and outputs of a network meta-analysis (NMA) when direct comparative data were not available (liraglutide 1.2mg). Model outputs include the derivation of incremental cost effectiveness ratios (ICER) per quality adjusted life year (QALY) for each comparison.

Baseline cohort characteristics (age, diabetes duration, baseline metabolic risk factors and CV complication rates) were based on the AWARD 6 clinical trial (Table 1).

**RESULTS**

Under base case assumptions, dulaglutide 1.5mg was less costly and more effective compared to both liraglutide 1.8mg and liraglutide 1.2mg (Table 2).

The probability that dulaglutide 1.5mg is cost-effective at SEK 500,000 (the informal Swedish effectiveness threshold [17]) is 100% compared to liraglutide 1.8mg and 1.2mg (Table 3).

**CONCLUSION**

Dulaglutide 1.5mg was found to be dominant (i.e. more effective and less costly) compared to liraglutide (1.2mg & 1.8mg) for the treatment of T2DM in the Swedish setting (Table 4).

Findings were robust to plausible variations in inputs (Figure 1, Figure 2 and Figure 3). Based on the results of the analyses, the introduction of dulaglutide may result in societal cost savings.

**LIMITATIONS**

No model can claim to be perfectly accurate but the IMS CORE Diabetes Model is one of the few models currently available with published validations that demonstrate the reliability of outcomes [7,8].

As with any cost-effectiveness model, in the absence of life-time data, a number of core assumptions are applied within the CDM in order to extrapolate the available short-term clinical trial figures. These assumptions are consistent with disease progression and based on established risk equations.

A further potential limitation is that at this stage in the clinical development process the optimum treatment duration of dulaglutide is unclear. Further evidence from observational data is required to confirm this but the model was robust to exploration of this.

**REFERENCES**

1. Ema Lilly and Company Limited, Wndlesham, UK; Ema Lilly Sweden, Stockholm, Sweden; IMS Health, London, UK; Ema Lilly Finland, Helsinki, Finland

2. Dulaglutide 1.5mg vs Liraglutide 1.8mg

3. Dulaglutide 1.5mg vs Liraglutide 1.2mg

4. Dulaglutide 1.5mg dominates liraglutide 1.1mg

5. Dulaglutide 1.5mg dominates liraglutide 1.2mg

6. Dulaglutide 1.5mg dominates liraglutide 1.1mg