ABSTRACT

Background: Diabetes mellitus rates continue to rise, which coupled with increasing costs of associated complications has appreciably increased global expenditure in recent years. The risk of complications are enhanced by poor glycaemic control including hypoglycaemia. Long-acting insulin analogues were developed to reduce hypoglycaemia and improve adherence. Their considerably higher costs though have impacted their funding and use. Biosimilars can help reduce medicine costs. However, their introduction has been affected by a number of factors. These include the originator company dropping its price as well as promoting patented higher strength 300 IU/ml insulin glargine. There can also be concerns with different devices between the manufacturers.

Objective: To assess current utilisation rates for insulins, especially long-acting insulin analogues, and the rationale for patterns seen, across multiple countries to inform strategies to enhance future utilisation of long-acting insulin analogue biosimilars to benefit all key stakeholders.

Our approach: Multiple approaches including assessing the utilisation, expenditure and prices of insulins, including biosimilar insulin glargine, across multiple continents and countries.

Results: There was considerable variation in the use of long-acting insulin analogues as a percentage of all insulins prescribed and dispensed across countries and continents. This ranged from limited use of long-acting insulin analogues among African countries compared to routine funding and use across Europe in view of their perceived benefits. Increasing use was also seen among Asian countries including Bangladesh and India for similar reasons. However, concerns with costs and value limited their use across Africa, Brazil and Pakistan. There was though limited use of biosimilar insulin glargine 100 IU/ml compared with other recent biosimilars especially among European countries and Korea. This was principally driven by small price differences in reality between the originator and biosimilars coupled with increasing use of the patented 300 IU/ml formulation. A number of activities were identified to enhance future biosimilar use. These included only reimbursing biosimilar long-acting insulin analogues, introducing prescribing targets and increasing competition among manufacturers including stimulating local production.

Conclusions: There are concerns with the availability and use of insulin glargine biosimilars despite lower costs. This can be addressed by multiple activities.

Keywords: Africa; Europe; biosimilars; cross-national study; drug utilisation; health policy; insulin glargine; prices.