

Budget Impact analysis of U100 Insulin in Egyptian diabetic patient

Objectives

To estimate the budget impact of switching to U100 insulin (100 units [U]/ml) in Egyptian diabetic patients over a time horizon of 5 years.

Methods

Pharmacy and medical budget impacts were estimated over the first 5 years of U100 insulin use in diabetic patients from the Egyptian health care system's perspective. Local epidemiology data were used to estimate target population size. Pre-U100 insulin entry treatment option included U40 insulin (40 units [U]/ml). Pre- and post-U100 insulin entry market shares were estimated based on market research and assumptions. Direct medical costs were derived from the Ministry of Health tender list. All costs were reported in Egyptian pounds of the financial year 2014. Deterministic sensitivity analysis was conducted.

Results

In a hypothetical 85,294,388-member plan, 1,234,380 patients were expected to be candidates for U100 insulin treatment in type I and type II diabetes. The total budget impact after 5 years post-U100 insulin was EGP -0.049 per member per month [PMPM] (pharmacy budget: EGP -0.047 PMPM; medical budget: EGP -0.002 PMPM), assuming 53.59% of the target population would switch to U100 insulin. Sensitivity analyses determined that the cost of U40 insulin and U100 insulin had the potential to impact the base case analysis.

Conclusions

The total budget for diabetes following U100 insulin use were cost-saving in comparison to U40 insulin. Conversion to U100 insulin would result in lower overall treatment costs in patients with diabetes from the health care system's perspective. An intensive information campaign providing detailed advice for patients, physicians and pharmacists is essential for the prevention of medication errors and reduction of overall costs.