Budget Impact Analysis of Insuline glargine U100 /Lixisenatide for Treatment of T2DM in Algerian Setting

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BACKGROUND

- The prevalence of type 2 diabetes mellitus (T2DM) is increasing in Algeria raising to about 14.4%, of people among 20-69 year old.
- The clinical management of people with T2DM represents a major public health challenge and an unsustainable economic burden for healthcare.

OBJECTIVE

The objective of this analysis, is to assess the budget impact for the introduction in Algeria of the fixed ratio combination : Insuline glargine U100 /Lixisenatide (iGlarLixi), in eligible population, over a time horizon of 5 years, from the Algerian health care system's perspective.

METHODS

- The budget impact analysis was designed with a 5-year time horizon for patients with T2DM, epidemiology data references were from National office of statistics, Stepwise WHO and IDMPS wave 7,
- The eligible population considered was:

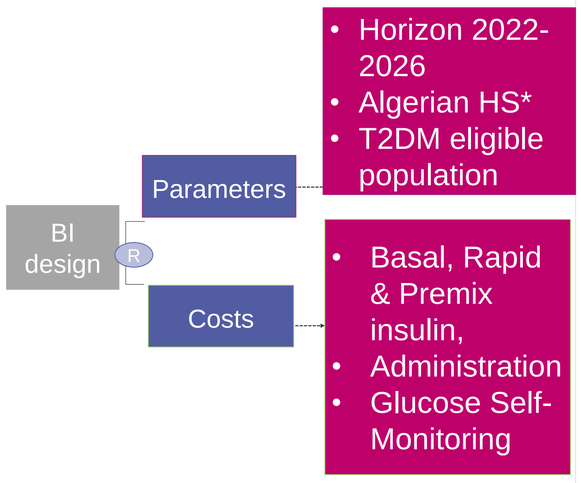
–Adults with T2DM insufficiently controlled on OAD with HbA1C >7%.

- The analysis included :

–Treatment costs in different treatment regimens.
–Costs of glycemic self-monitoring which are covered by the social security.
–Administration costs (not including nurses costs).

- All costs were reported in euros (EUR).
- Deterministic sensitivity analysis was carried out on all relevant costs and parameters included in the budget impact assessment.

Figure 1: Budget Impact design



*Healthcare system

RESULTS

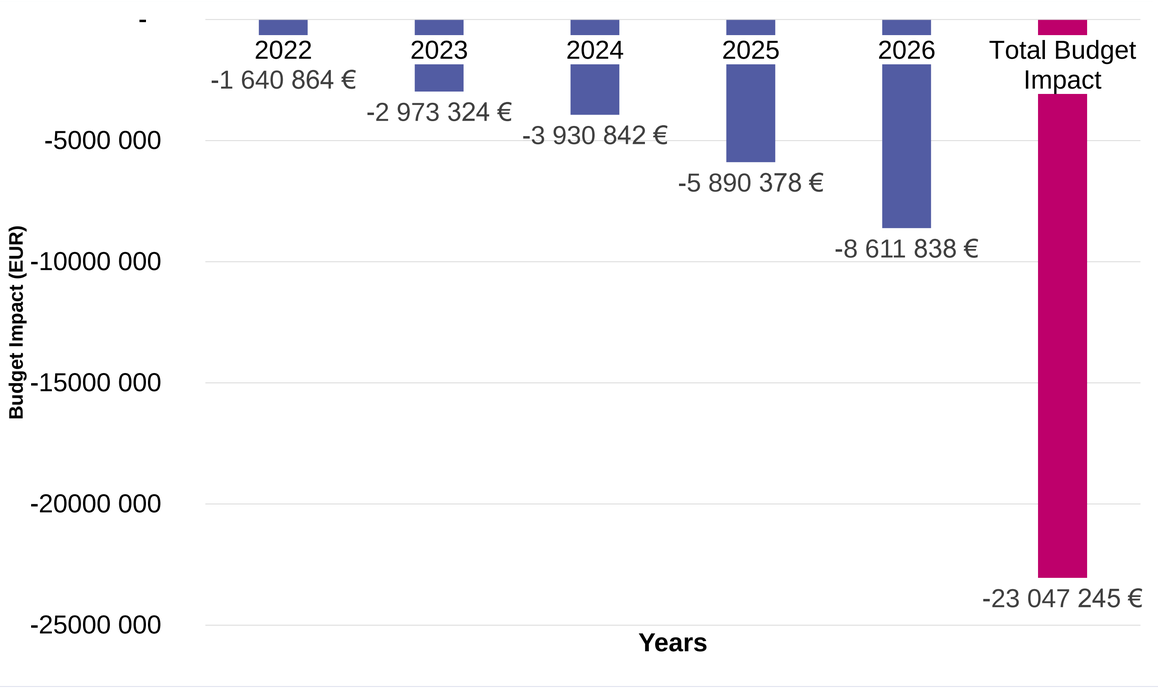
- The results showed a negative budget impact of (BI = -23 Millions €) cumulative over the 5 years.
- In the 1st year, it is -1,6 M €. In the 2nd year the budget impact starts decreasing significatively and reaches : -2,9 M €, this is mainly driven by increasing market share of iGlarLixi, the negative impact reaches -8,6 M € in the fifth year, this is due mainly to iGlarLixi takes market share from basal-bolus regimens and premix bi-daily and tri-daily resulting in cost savings as it is a less costly fixed-ratio combination.
- Although, iGlarLixi increases the drug budget, it has also shown a negative budget impact by reducing other costs related to the glycemic self-monitoring, as it is a simplier treatment option.
- Sensitivity analysis determined that the cost of treatment and basal & rapid insulin dose had the potential to impact the base case analysis.

POSTER HIGHLIGHTS

Table 1 : Budget Impact Ressources

	Populations	Costs	Insulin dose
Methodology	• Adults with T2DM insufficiently controlled on OAD with HbA1C >7%	• Treatment costs[1] • Glucose self-monitoring costs[1] • Administration costs[1]	• A weighted average dose based on market shares of all basal, rapid insulins and premix insulins[1]
References	• National office of statistics • Stepwise WHO • IDMPS wave 7	• IMS data 2022[1]	• IMS data 2022 & Diabetrack Algeria[1]

Figure 2: Budget impact 2022-2026



*Exchange rate : 1 EUR = 160DZD

Figure 3 : Budget impact per regimen vs iGlarLixi 2022-2026

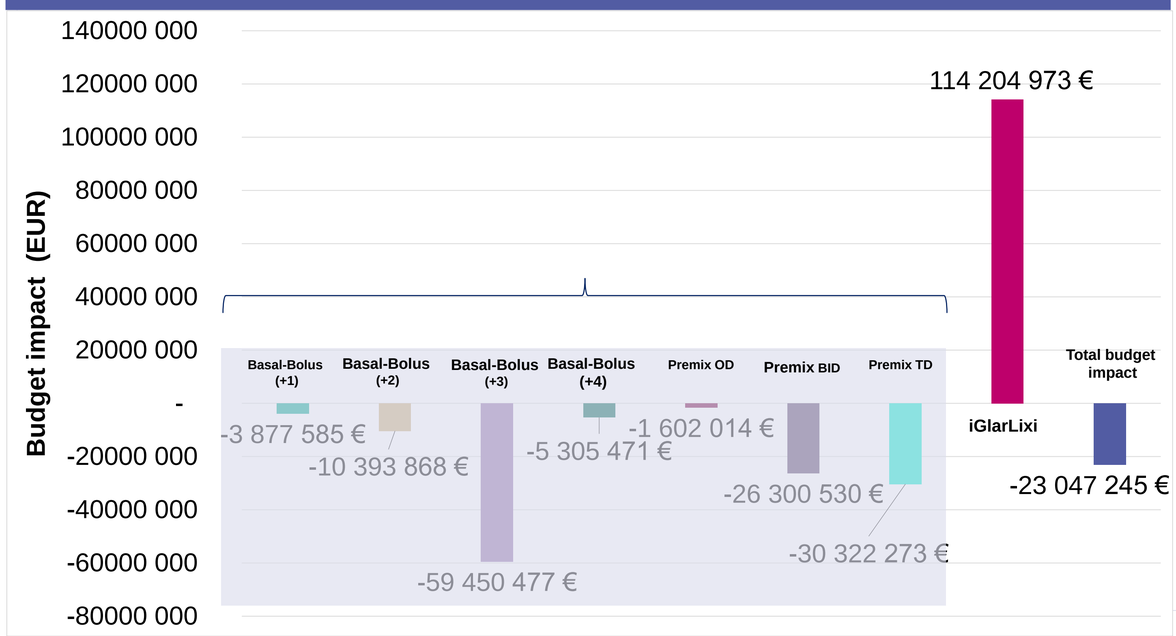
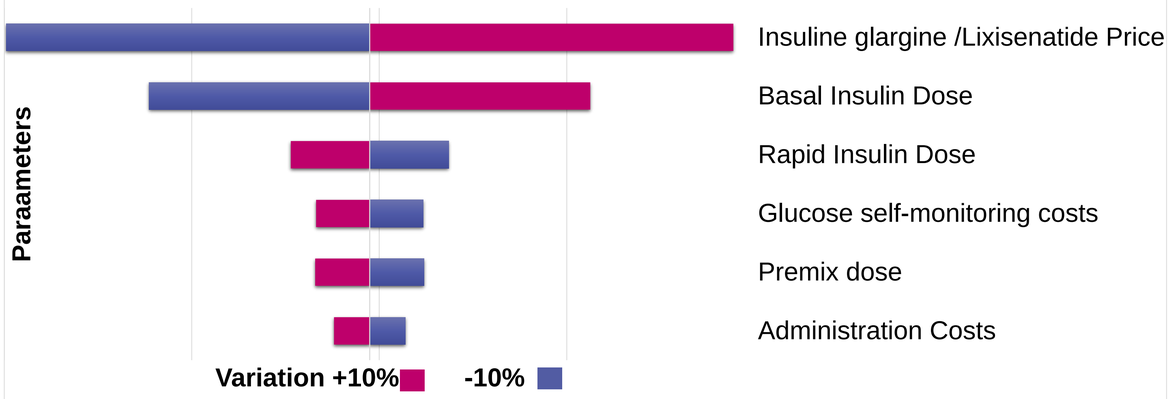


Figure 4 : Tornado Diagram - Sensitivity Analysis



RESULTS (continued)

- Current treatment advancement paradigm relies only on complex regimens based on combination of basal and rapid-acting insulins and/or premix insulins, therefore the study focused on comparing iGlarLixi to these treatments.
- The BI model was developed in MS Excel, it is a dynamic and flexible model that allows payers to adjust scenarios.
- After introducing iGlarLixi in Algeria, this study has shown potential savings associated with reducing costs related to glucose self-monitoring, and costs related to complex regimens basal-bolus(+3) and premix BID and Tri-daily.
- The analysis has shown that the budget impact is sensitive to drug acquisition costs, daily dose of basal, rapid & premix Insulin, and also administration and glucose self-monitoring costs
- The study limit is the daily dose assumption for all regimens, as the repartition of doses and market shares per regimens were estimated from a market research done locally (no other reference).
- The budget impact didn't take in consideration the clinical effect of iGlarLixi.

DISCUSSION

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- The budget impact didn't take in consideration the clinical effect of iGlarLixi.

CONCLUSIONS

- The introduction of iGlarLixi in Algeria offers a considerable savings on healthcare expenses and for the national social security budget (-23 Millions € over 5 years). Therefore, the fixed ratio combination of insulin glargine and lixisenatide is a cost-saving alternative.

REFERENCES

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FUNDING

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